CDP-C460Z/CE515

SERVICE MANUAL

US Model
CDP-C460Z/CE515
Canadian Model
AEP Model
Australian Model
CDP-CE515

Photo : CDP-CE515

Model Name Using Similar Mechanism	CDP-C360Z/CE415
CD Mechanism Type	CDM27G-5BD22
Base Unit Type	BU-5BD22
Optical Pick-up Type	KSS-213BA/F-NP

SPECIFICATIONS

Compact Disc Player

Laser	Semiconductor laser (λ = 780 nm) Emission duration: continuous
Laser output	Max 44.6 μW* * This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up block with 7 mm aperture.
Frequency response	2 Hz to 20 kHz ± 0.5 dB
Signal-to-noise ratio	More than 107 dB
Dynamic range	More the 98 dB
Harmonic distortion	Less than 0.0035%

Output

	Jack type	Maximum output level	Load impedance
LINE OUT	Phono jacks	2V (at 50 kilohms)	Over 10 kilohms
DIGITAL OUT (OPTICAL)	Optical output connector	–18 dBm	Wave length: 660 nm
PHONES	Stereo phone jack	10 mW	32 ohms

General

Power requirements

Where purchased	Power requirements
USA/Canada	120 V AC, 60 Hz
Europe	220 V – 230 V AC, 50/60 Hz
Australia	240 V AC, 50/60 Hz

Power consumption	14W
Dimensions (approx.) (w/h/d)	430 × 120 × 393 mm (17 × 4 3/4 × 15 1/2 in.) incl. projecting parts
Mass (approx.)	5.4 kg (11 lbs 15 oz)

Supplied accessories

Audio cord (2 phono plugs–2 phono plugs) (1)
Remote commander (remote)(1)
Sony SUM-3 (NS) batteries (2)

Design and specifications are subject to change without notice.

COMPACT DISC PLAYER

MICROFILM

SONY

The following caution label is located inside of the unit.

CAUTION	;	INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ADVARSEL	;	USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDS ÆTTELSE FOR STRÅLING.
VARO!	;	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA LASERSÄTEILYLLE.
VARNING	;	LASERSTRÅLING NÄR DENNA DEL ÄR OPPNÅD OCH SPÄRREN ÄR URXOPPLAD.
ADVARSEL	;	USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNNGÅ EKSPONERING FOR STRÅLEN.

This appliance is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

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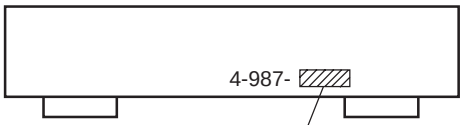
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈSES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPÉMENTS PUBLIÉS PAR SONY.

MODEL IDENTIFICATION
— BACK PANEL —



CDP-CE515
US Model : 842-0☐
CDP-CE515
Canadian Model : 842-1☐
CDP-CE515
AEP Model : 842-2☐
CDP-C460Z
US Model : 842-3☐
CDP-CE515
Australian Model : 842-5☐

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

SAFETY CHECK-OUT

(US model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer: Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

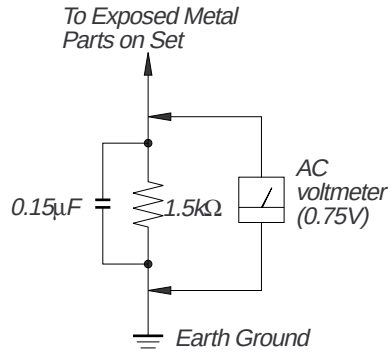


Fig. A. Using an AC voltmeter to check AC leakage.

CD-TEXT TEST DISC

This unit is able to display the test data (character information) written in the CD on its fluorescent indicator tube.
The CD-TEXT TEST DISC (TGCS-313:4-989-366-01) is used for checking the display.
To check, perform the following procedure.

Checking Method:

1. Turn ON the power, set the disc on the disc table with the side labeled as “test disc” as the right side, close the front cover, and chuck the disc.
2. Press the [▶] button and play back the disc.
3. The following will be displayed on the fluorescent indicator tube.
   Display : 1kHz/0 dB/ L&R
4. Press the [⏮] and [⏭] buttons to switch the track. The text data of each track will be displayed.
   For details of the displayed contents for each track, refer to “Table 1 : CD-TEXT TEST DISC TEXT Data Contents” and “Table 2 : CD-TEXT TEST DISC Recorded Contents and Display”.

Restrictions in CD-TEXT Display

In this unit, some special characters will not be displayed properly. These will be displayed as a space or a character resembling it. For details, refer to “Table 2 : CD-TEXT DISC Recorded Contents and Display”.

Table 1 : CD-TEXT TEST DISC TEXT Data Contents (TRACKS No. 1 to 41:Normal Characters)

TRACK No.	Displayed Contents	TRACK No.	Displayed Contents
1	1kHz/0dB/L&R	22	1kHz/-90dB/L&R
2	20Hz/0dB/L&R	23	Infinity Zero w/o emphasis//L&R
3	40Hz/0dB/L&R	24	Infinity Zero with emphasis//L&R
4	100Hz/0dB/L&R	25	400Hz+7kHz(4:1)/0dB/L&R
5	200Hz/0dB/L&R	26	400Hz+7kHz(4:1)/-10dB/L&R
6	500Hz/0dB/L&R	27	19kHz+20kHz(1:1)/0dB/L&R
7	1kHz/0dB/L&R	28	19kHz+20kHz(1:1)/-10dB/L&R
8	5kHz/0dB/L&R	29	100Hz/0dB/L*
9	7kHz/0dB/L&R	30	1kHz/0dB/L*
10	10kHz/0dB/L&R	31	10kHz/0dB/L*
11	16kHz/0dB/L&R	32	20kHz/0dB/L*
12	18kHz/0dB/L&R	33	100Hz/0dB/R*
13	20kHz/0dB/L&R	34	1kHz/0dB/R*
14	1kHz/0dB/L&R	35	10kHz/0dB/R*
15	1kHz/-1dB/L&R	36	20kHz/0dB/R*
16	1kHz/-3dB/L&R	37	100Hz Squer Wave//L&R
17	1kHz/-6dB/L&R	38	1kHz Squer Wave//L&R
18	1kHz/-10dB/L&R	39	1kHz w/emphasis/-0.37dB/L&R
19	1kHz/-20dB/L&R	40	5kHz w/emphasis/-4.53dB/L&R
20	1kHz/-60dB/L&R	41	16kHz w/emphasis/-9.04dB/L&R
21	1kHz/-80dB/L&R		

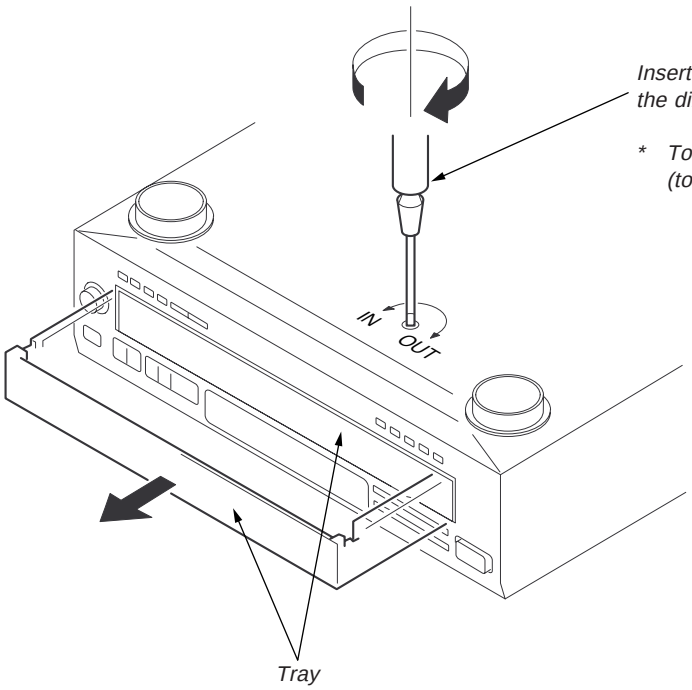
* Other channel is infinity zero.

NOTE : The contents of Track No. 1 to 41 are the same as those of the current TEST DISC-their titles are displayed.

Table 2: CD-TEXT TEST DISC Recorded Contents and Display
(In this unit, some special characters cannot be displayed. This is no a fault.)

TRACK	Recorded contents	Display
42	! " # $ % & ' (21h to 27h)1kHz 0dB L&R	← All the same
43	( ) * + , – . / (28h to 2Fh)	← All the same
44	0 1 2 3 4 5 6 7 (30h to 37h)	← All the same
45	8 9 : ; < = > ? (38h to 3Fh)	← All the same
46	@ A B C D E F G (40h to 47h)	← All the same
47	H I J K L M N O (48h to 4Fh)	← All the same
48	P Q R S T U V W (50h to 57h)	← All the same
49	X Y Z [¥] ^ _ (58h to 5Fh)	X Y Z [\ ] ^ _ (58····
50	` a b c d e f g (60h to 67Fh)	|| a b c d e f g (60····
51	h i j k l m n o (68h to 6Fh)	← All the same
52	p q r s t u v w (70h to 77h)	← All the same
53	x y z { | } ~ ▉ (78h to 7Fh)	x y z { | } – ▉ (78····
54	▉ ¡ ¢ £ ¤ ¥ ¦ § (A0h to A7h) 8859-1	(A0····All not displayed
55	♪ © ª « ¬ ® ¯ (A8h to AFh)	(A8····All not displayed
56	° ± ² ³ ´ µ ¶ • (B0h to B7h)	(B0····All not displayed
57	† ¹ º » ¼ ½ ¾ ¿ (B8h to BFh)	(B8····All not displayed
58	À Á Â Ã Ä Å Æ Ç (C0h to C7h)	A A A A A A C (C0····Æ is not displayed
59	È É Ê Ë Ì Í Î Ï (C8h to CFh)	E E E E I I I I (C8
60	Ð Ñ Ò Ó Ô Õ Ö × (D0h to D7Fh)	D N O O O O O (D0····× is not displayed
61	Ø Ù Ú Û Ü Ý Þ ß (D8h to DFh)	O U U U U Y (D8····Þ ß are not displayed
62	à á â ã ä å æ ç (E0h to E7h)	a a a a a a c (E0····æ is not displayed
63	è é ê ë ì í î ï (E8h to EFh)	e e e e i i i i (E8····
64	ð ñ ò ó ô õ ö ÷ (F0h to F7h)	d n o o o o o (F0····÷ is not displayed
65	ø ù ú û ü ý þ ÿ (F8h to FFh)	o u u u u y y (F8····þ is not displayed
66	No.66	← All the same
67	No.67	← All the same
to	to	to
99	No.99	← All the same

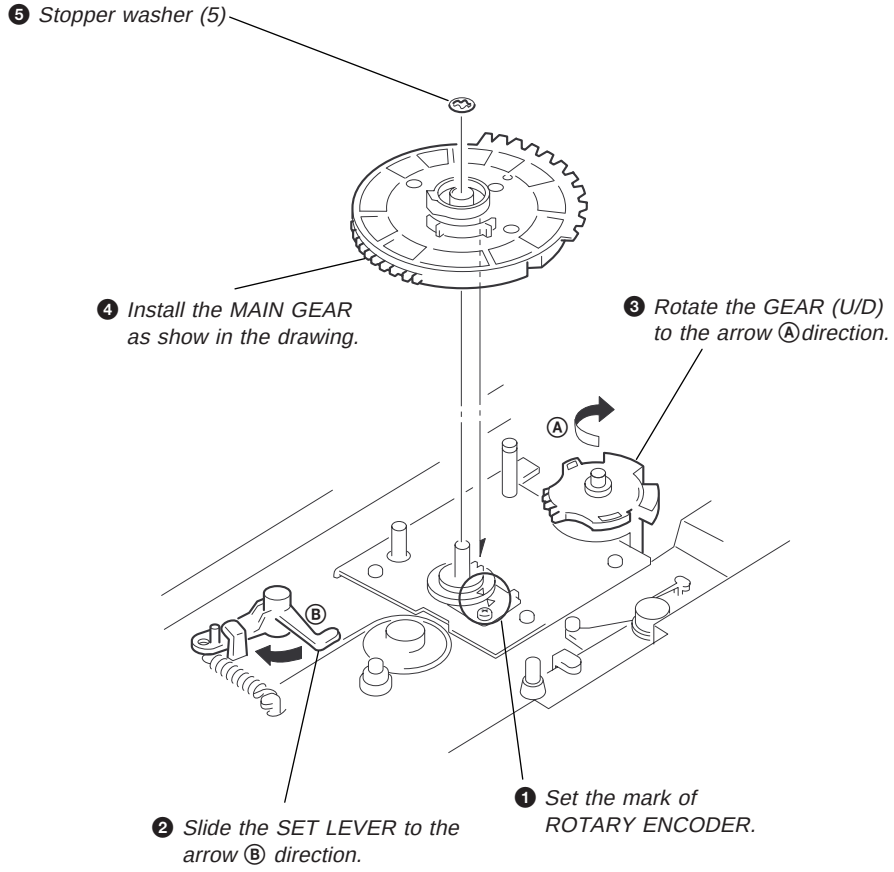
HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF



Insert a tapering driver into the aperture of the unit bottom, and turn in the direction of arrow (to OUT direction).

* *To close the disc tray, turn the driver in the reverse direction (to IN direction).*

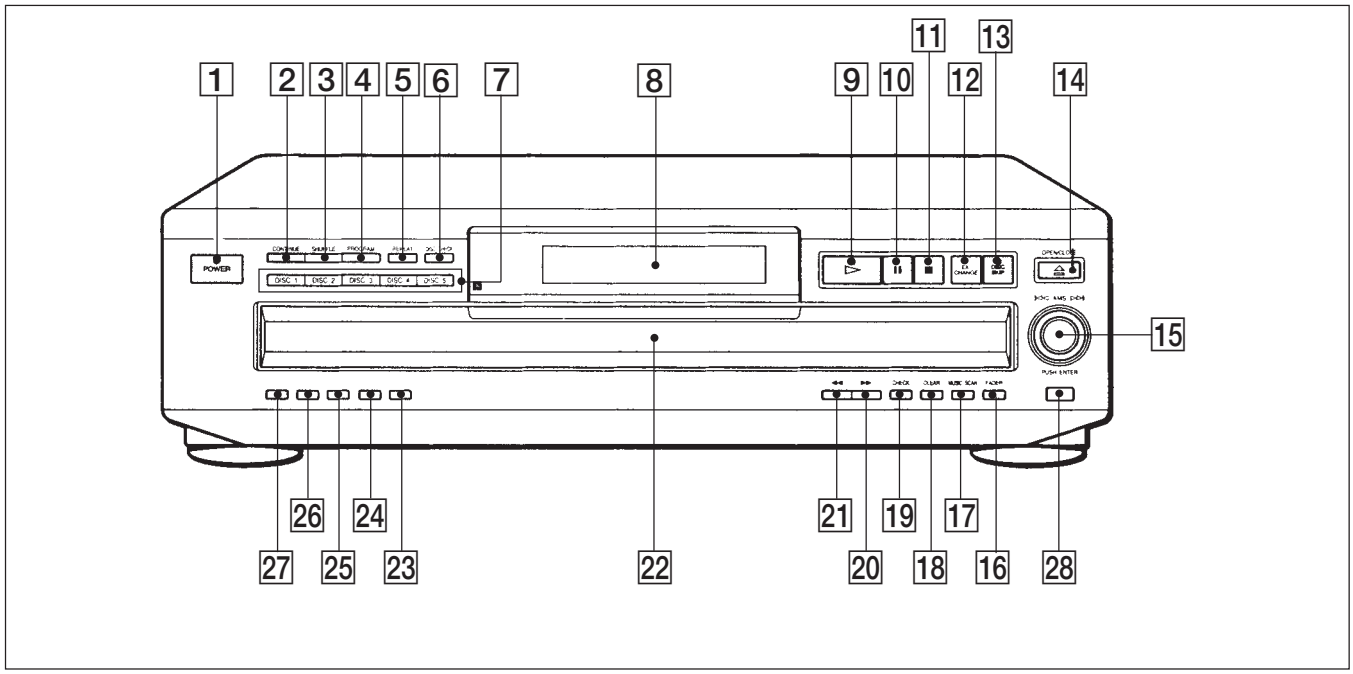
NOTE FOR MAIN GEAR INSTALLATION


❺ Stopper washer (5)
❹ Install the MAIN GEAR as show in the drawing.
❸ Rotate the GEAR (U/D) to the arrow Ⓐ direction.
Ⓐ
Ⓑ
❷ Slide the SET LEVER to the arrow Ⓑ direction.
❶ Set the mark of ROTARY ENCODER.

SECTION 1
GENERAL

Identifying the Parts

Front Panel

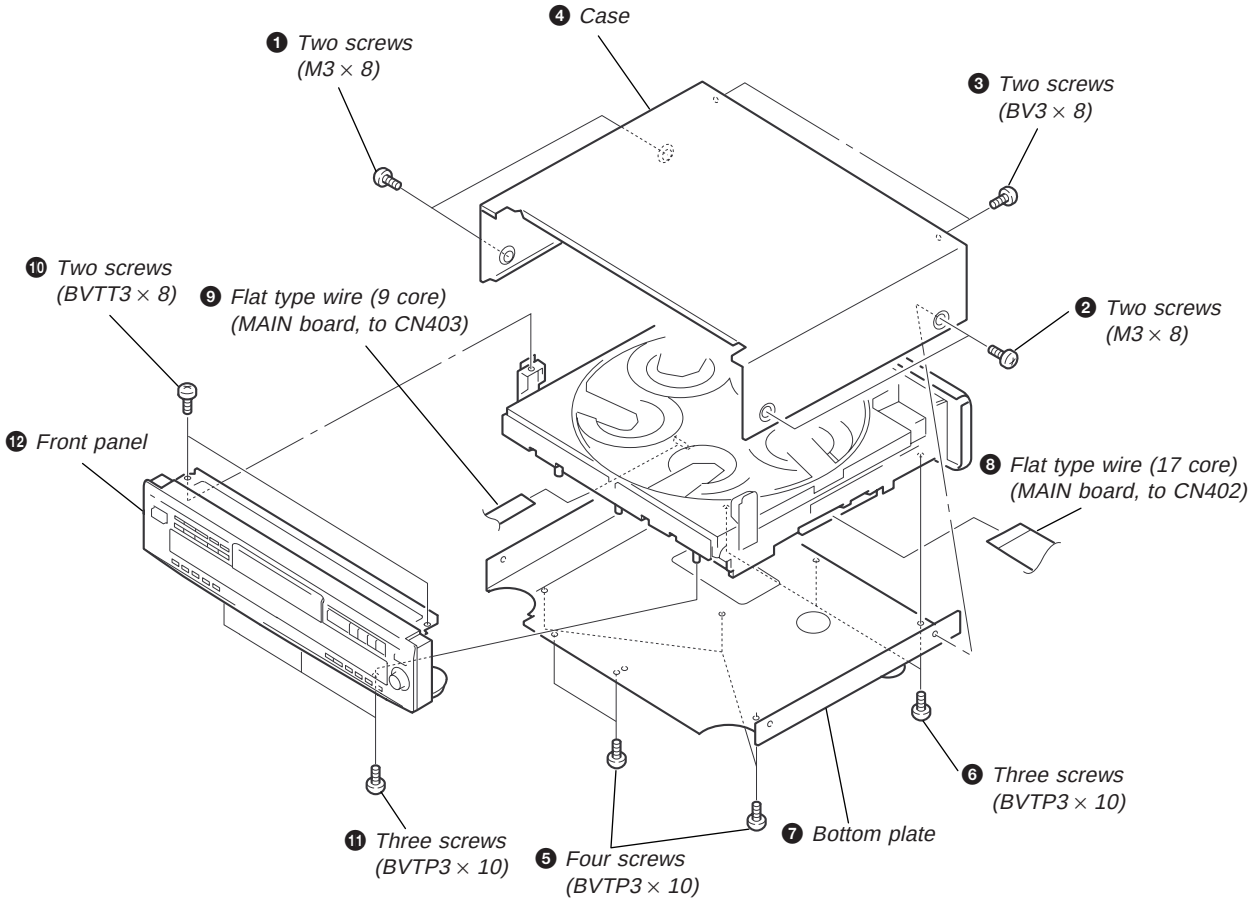


1 POWER switch
2 CONTINUE button
3 SHUFFLE button
4 PROGRAM button
5 REPEAT button
6 TIME/TEXT button : C460Z model
DISC CHECK button : CE515 model
7 DISC 1-5 button
8 Display window
9 ► (play) button
10 ❚❚ (pause) button
11 ■ (stop) button
12 EX-CHANGE button
13 DISC SKIP button
14 ⏏ OPEN/CLOSE button
15 AMS knob
16 X-FADE button
17 NO DELAY button
18 CLEAR button
19 CHECK button
20 ►► (forward) button
21 ◄◄ (backward) button
22 Disc tray
23 PEAK SEARCH button: CE515 model
24 EDIT/TIME FADE button: CE515 model
25 TIME/TEXT button: CE515 model
26 FADER button
27 MEMO INPUT button
28 MEGA CONTROL button

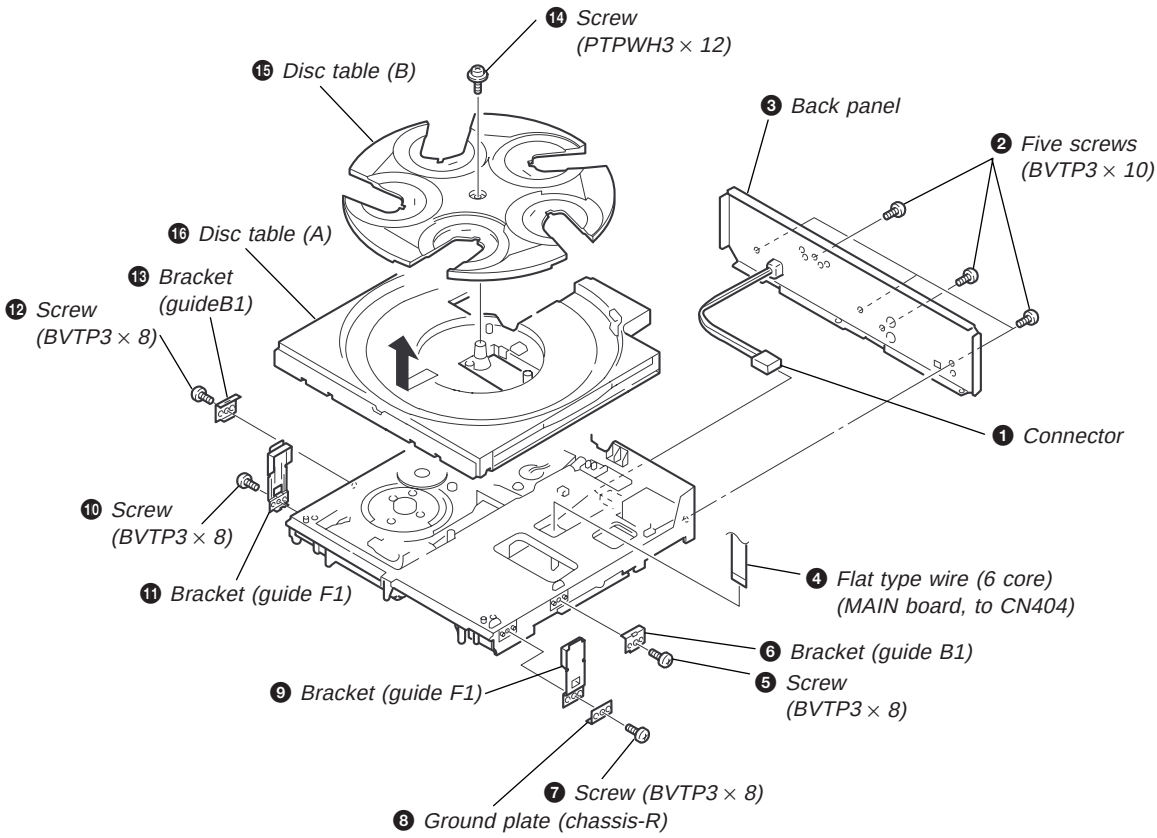
SECTION 2
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

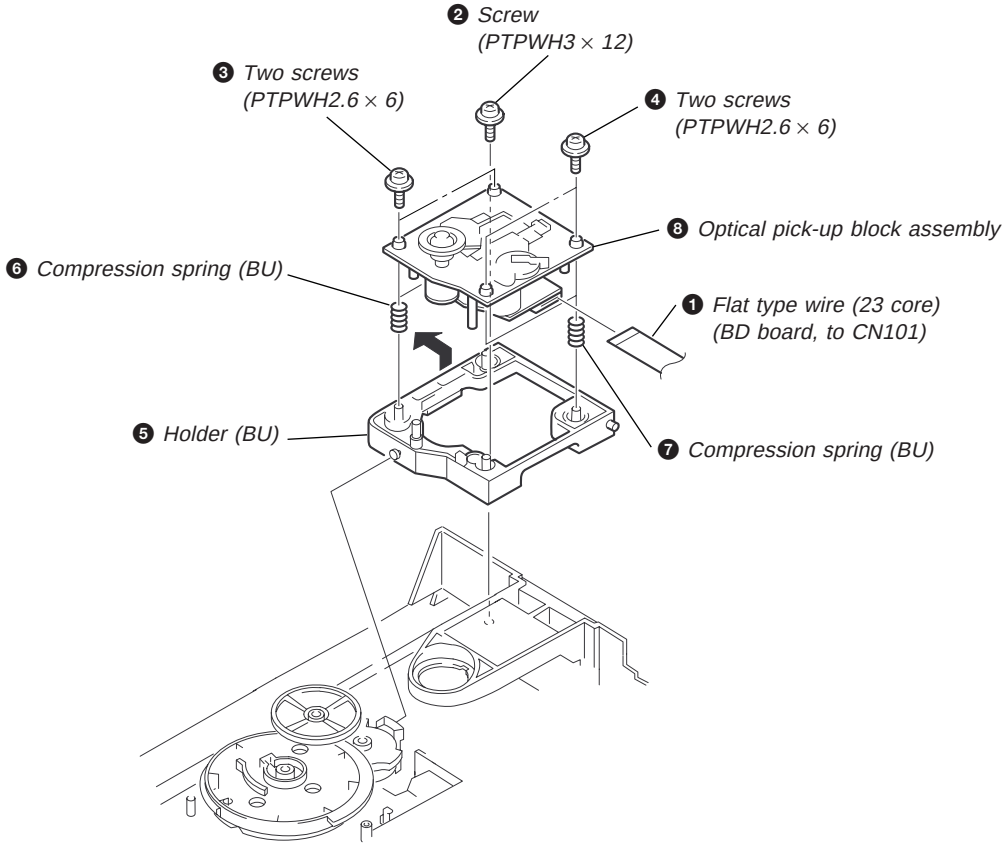
2-1. CASE, BOTTOM PLATE AND FRONT PANEL


❹ Case
❶ Two screws (M3 × 8)
❸ Two screws (BV3 × 8)
❿ Two screws (BVTT3 × 8)
❾ Flat type wire (9 core) (MAIN board, to CN403)
❷ Two screws (M3 × 8)
⓬ Front panel
❽ Flat type wire (17 core) (MAIN board, to CN402)
❻ Three screws (BVTP3 × 10)
⓫ Three screws (BVTP3 × 10)
❺ Four screws (BVTP3 × 10)
❼ Bottom plate

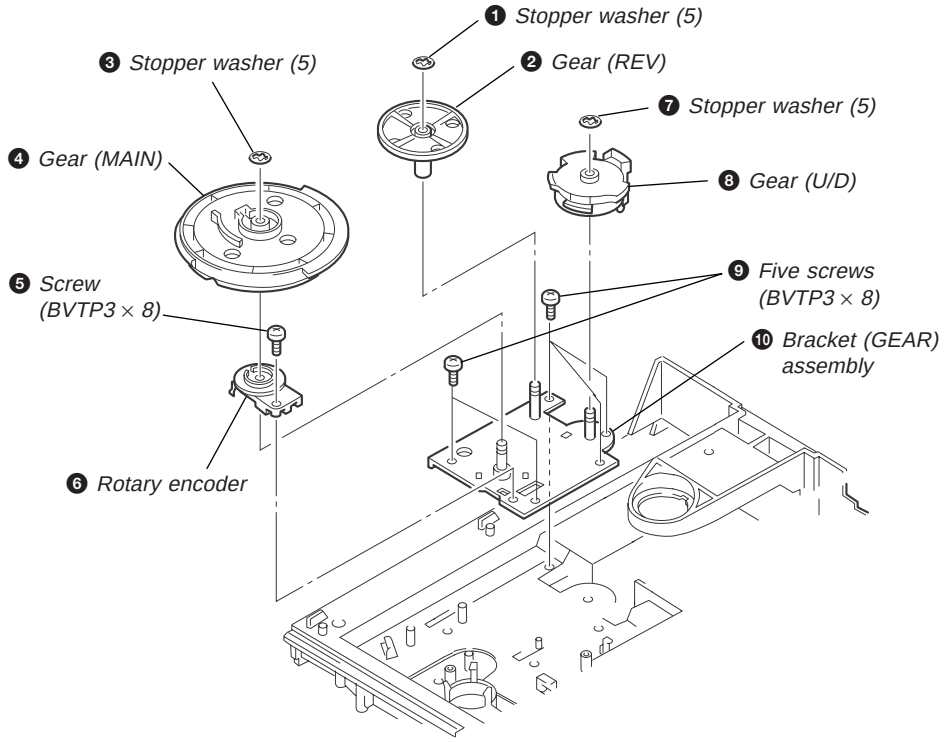
2-2. BACK PANEL AND DISC TABLE


⓮ Screw (PTPWH3 × 12)
⓯ Disc table (B)
❸ Back panel
❷ Five screws (BVTP3 × 10)
⓰ Disc table (A)
⓭ Bracket (guideB1)
⓬ Screw (BVTP3 × 8)
❶ Connector
⓾ Screw (BVTP3 × 8)
❹ Flat type wire (6 core) (MAIN board, to CN404)
⓫ Bracket (guide F1)
❻ Bracket (guide B1)
❺ Screw (BVTP3 × 8)
❾ Bracket (guide F1)
❼ Screw (BVTP3 × 8)
❽ Ground plate (chassis-R)

2-3. OPTICAL PICK-UP BLOCK ASSEMBLY



2-4. BRACKET (GEAR) ASSEMBLY



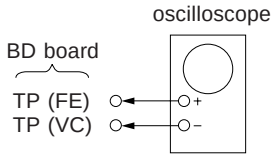
Note : As for the installation of the main gear, refer to “Note for MAIN GEAR installation” on page 4.

SECTION 3
ELECTRICAL BLOCK CHECKING

Note :

1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens using an applicator with neutral detergent when the signal level is low than specified value with the following checks.

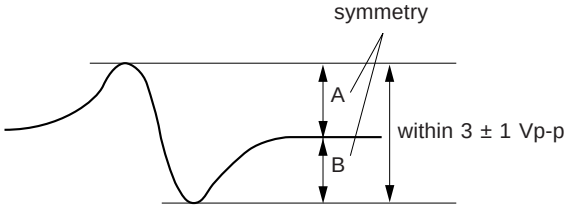
S Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FE) on BD board.
2. Connect between test point TP (FEI) and TP (VC) by lead wire.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and turn Power switch on again and actuate the focus search. (Actuate the focus search when disc table is moving in and out.)
5. Check if the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3±1 Vp-p.

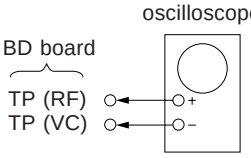
S-curve waveform



6. After check, remove the lead wire connected in step 2.

Note : • Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check



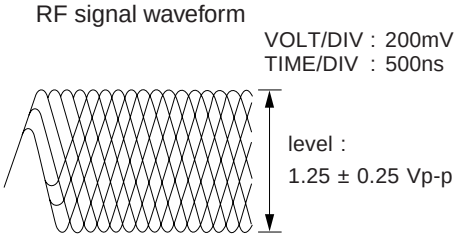
Procedure :

1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in to play the number five track.
4. Confirm that oscilloscope waveform is clear and check if RF signal level is correct or not.

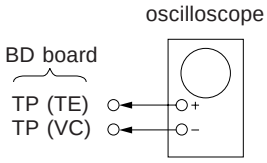
Note :

A clear RF signal waveform means that the shape " ◊ " can be clearly distinguished at the center of the waveform.

RF signal waveform



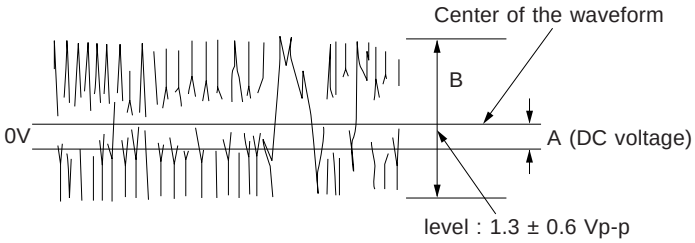
E-F Balance Check



Procedure :

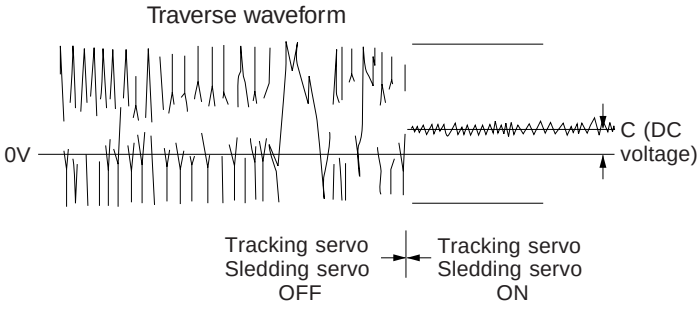
1. Connect test point TP1 (ADJ) to ground with a lead wire.
2. Connect oscilloscope to test point TP (TE) on BD board.
3. Turned Power switch on.
4. Put disc (YEDS-18) in to play the number five track.
5. Press the "3" button. (The tracking servo and the sledding servo are turned OFF.)
6. Check the level B of the oscilloscope's waveform and the A (DC voltage) of the center of the Traverse waveform.
   Confirm the following :
   A/B × 100 = less than ± 22%

Traverse waveform



7. Press the "8" button. (The tracking servo and sledding servo are turned ON.) Confirm the C (DC voltage) is almost equal to the A (DC voltage) is step 6.

Traverse waveform

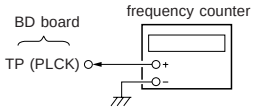


8. Disconnect the lead wire of test point TP1 (ADJ) connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

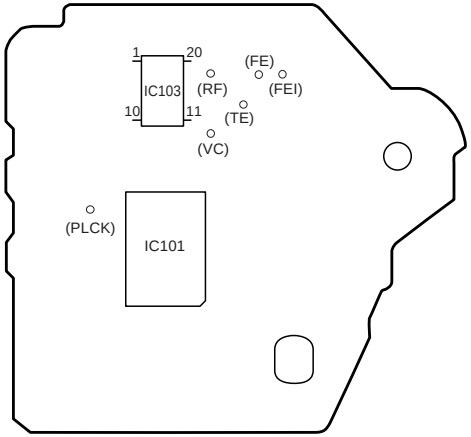
1. Connect frequency counter to test point TP (PLCK) with lead wire.



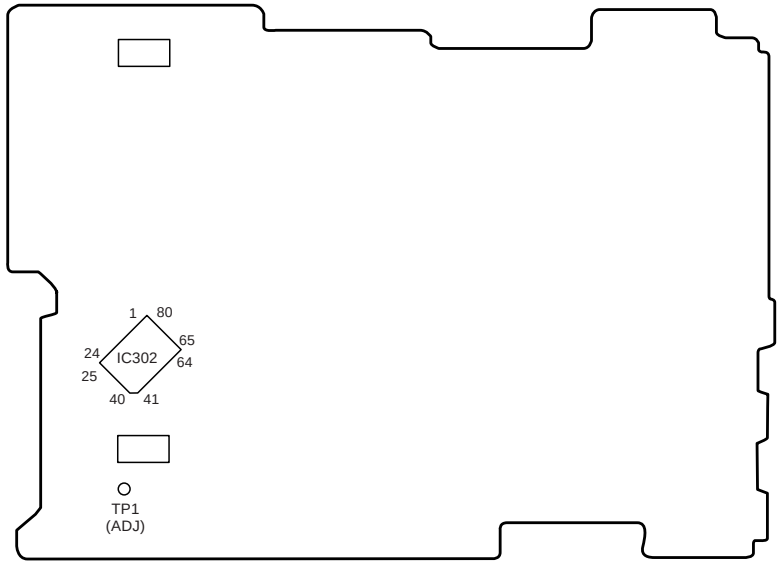
2. Turned Power switch on.
3. Put the disc (YEDS-18) in to play the number five track. Confirm that reading on frequency counter is 4.3218MHz.

Adjustment Location :

[BD BOARD] — Conductor Side —

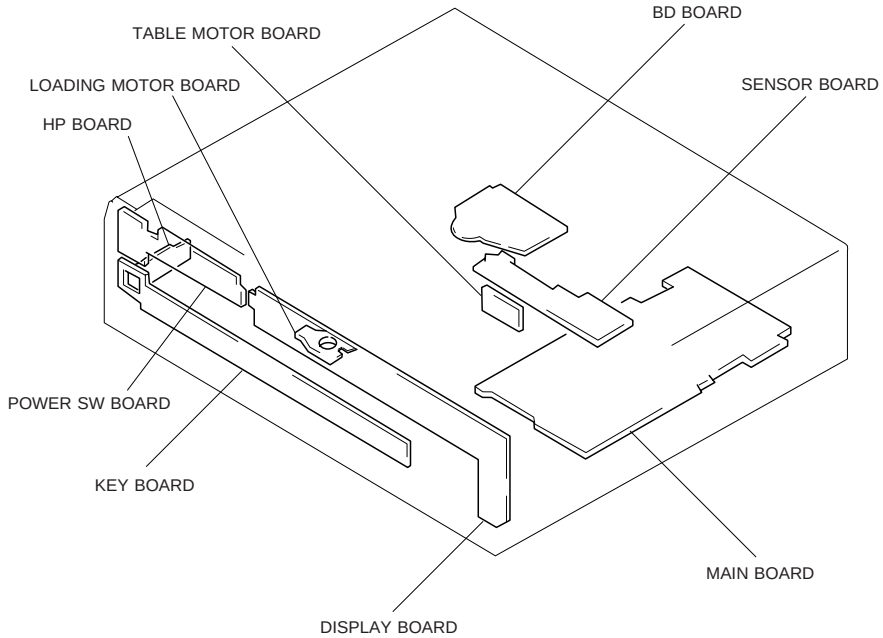


[MAIN BOARD] — Conductor Side —



SECTION 4
DIAGRAMS

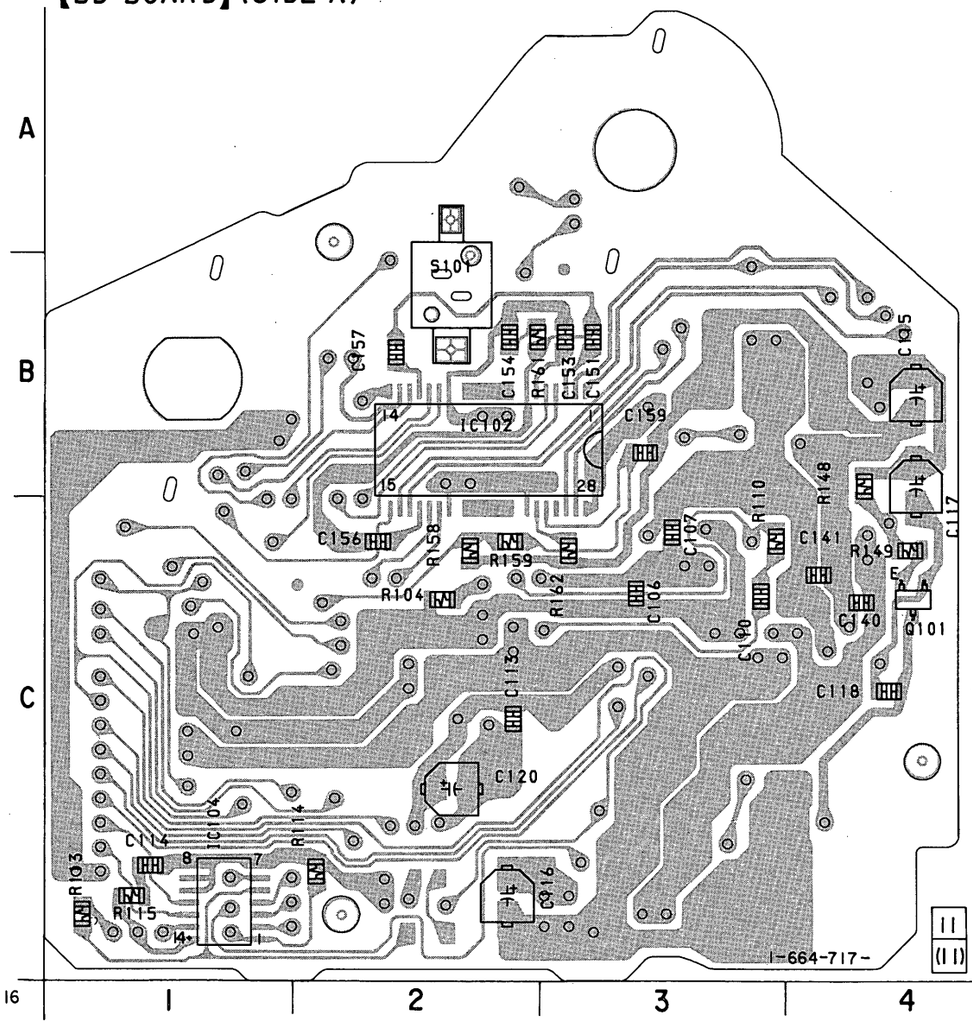
4-1. CIRCUIT BOARDS LOCATION



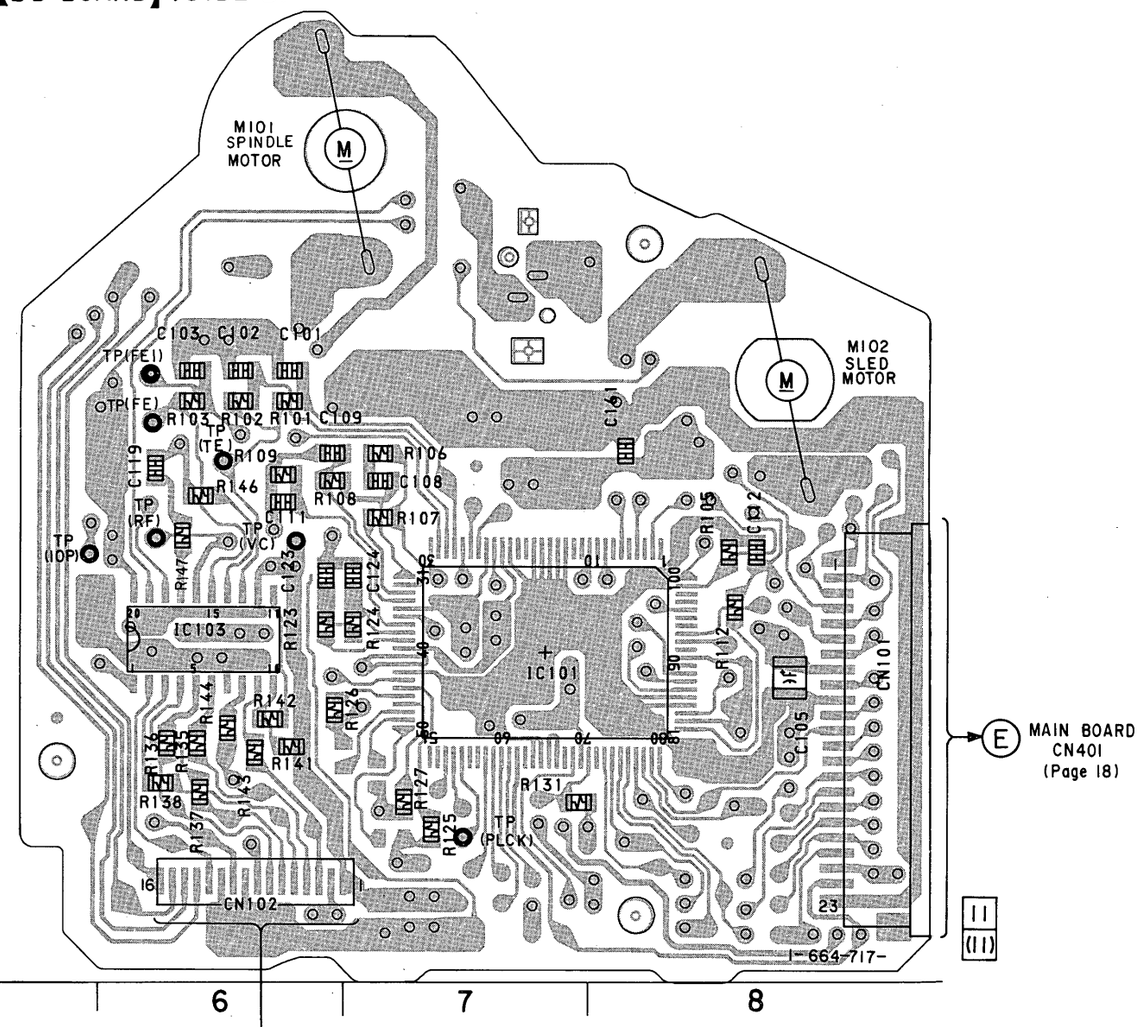
4-2. PRINTED WIRING BOARD – BD SECTION –

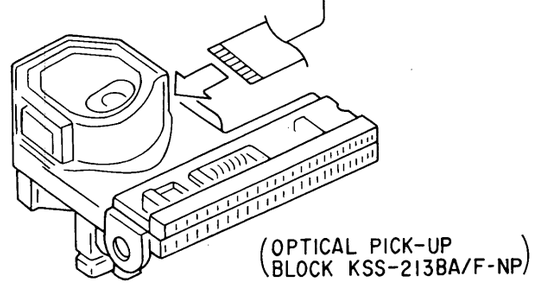
• See page 12 for Circuit Board Location.

【BD BOARD】(SIDE A)



【BD BOARD】(SIDE B)





• **Semiconductor Location**

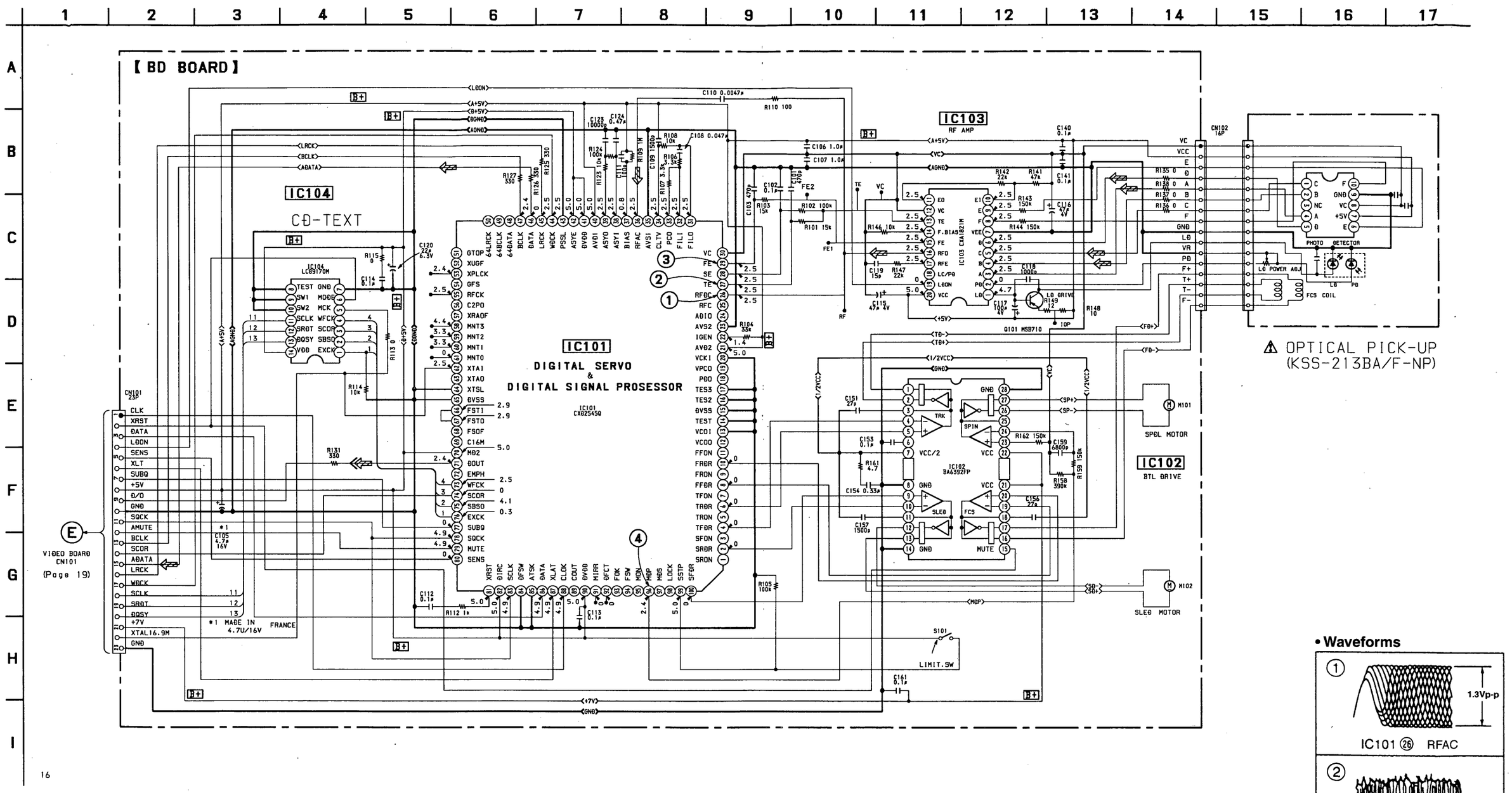
Ref. No.	Location
IC101	C-7
IC102	B-2
IC103	C-6
IC104	C-1
Q101	C-4

Note:

- ⟷ : Parts extracted from the component side.
- ○ : Through hole.
- ▬ : Pattern from the side which enable seeing. (The other layer's patterns are not indicated.)

4-3. SCHEMATIC DIAGRAM – BD SECTION –

• See page 25 for IC Block Diagrams.
• See page 27 for IC Pin Functions. (IC101)



Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- B+ : B+ Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  No mark: STOP
- Voltages are taken with a VOM (Input impedance 10MΩ).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.

- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD
  ⇛ : CD (digital)

Note : The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	**Note :** Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

• Waveforms

① 1.3Vp-p
IC101 ㉖ RFAC

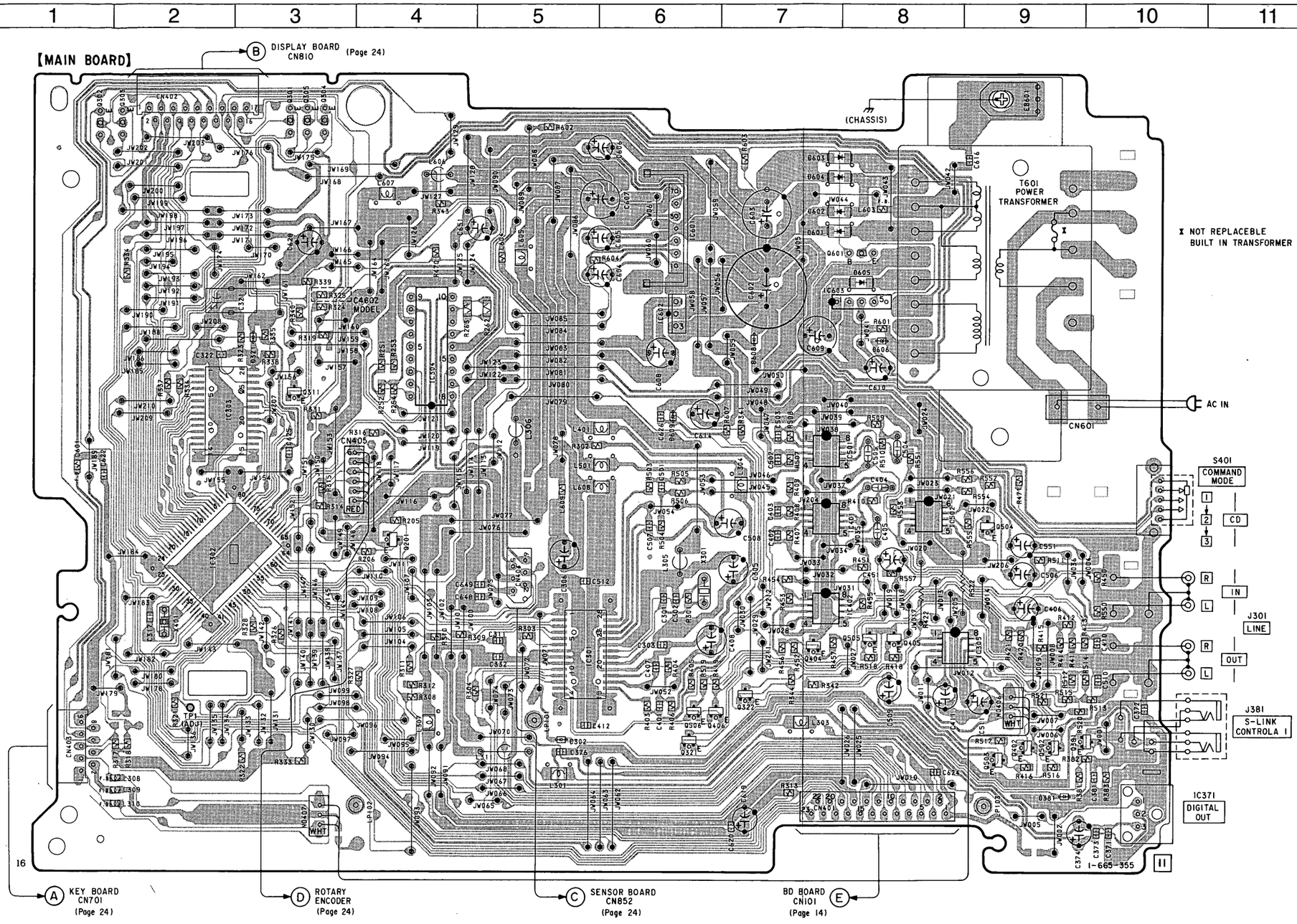
② 2.5V
APPROX 200mVp-p
IC101 ㉗ TE

③ 2.5V
APPROX 100mVp-p
IC101 ㉙ FE

④ 2.6Vp-p
7.5 μsec
IC101 ㊱ MDP

4-4. PRINTED WIRING BOARD – MAIN SECTION –

• See page 12 for Circuit Board Location.



• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D302	F-5	IC603	C-7
D381	G-9		
D601	B-7	Q201	E-4
D602	B-7	Q301	A-3
D603	B-7	Q302	A-1
D604	B-7	Q303	A-2
D605	B-8	Q304	A-3
D606	C-8	Q305	A-3
D608	C-7	Q311	C-3
D609	D-6	Q321	F-6
		Q322	F-7
IC301	F-5	Q381	F-9
IC302	E-2	Q402	F-9
IC303	D-2	Q404	F-7
IC304	C-4	Q405	E-8
IC305	F-9	Q406	F-6
IC371	G-10	Q502	F-9
IC401	E-7	Q503	F-9
IC402	E-8	Q504	E-9
IC501	D-7	Q505	E-8
IC502	E-8	Q506	F-6
IC601	B-6	Q601	B-7
IC602	C-6		

• **Waveforms**

⑤ 4.6Vp-p, 10MHz
IC302 ㉛ EXTAL

⑥ 5.0Vp-p, 44.1kHz
IC301 ⑫ LRCK

⑦ 5Vp-p, 2.11MHz
IC301 ⑩ BCK

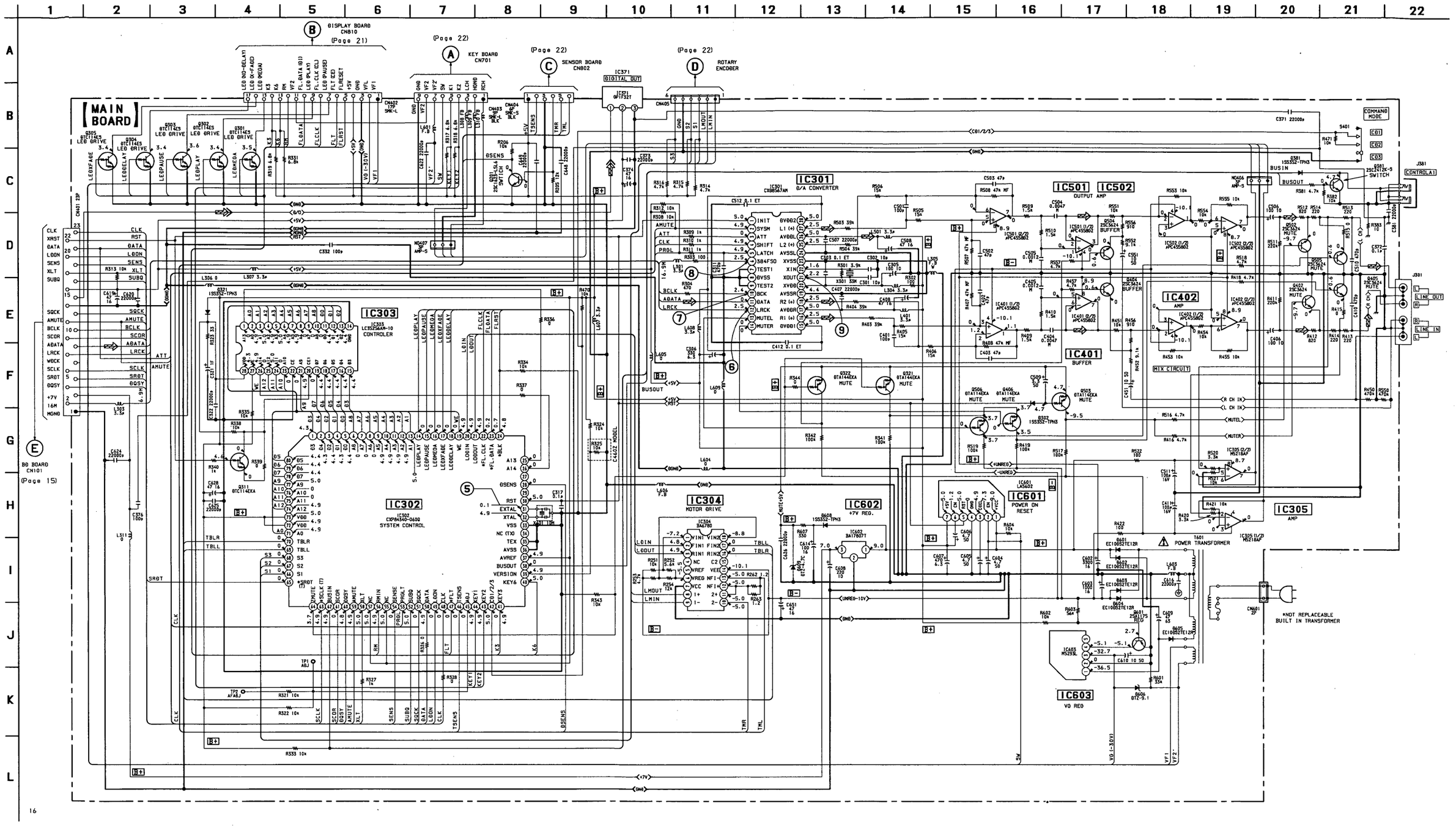
⑧ 6.4 Vp-p, 16.9MHz
IC301 ⑥ 384 FSO

⑨ 3.3Vp-p, 33.868MHz
IC301 ㉑ X OUT

Note:
- ——○—— : Parts extracted from the component side.
- △ : Internal component.
- ▬▬ : Pattern from the side which enable seeing.

4-5. SCHEMATIC DIAGRAM – MAIN SECTION –

• See page 25 for IC Block Diagrams.
• See page 30 for IC Pin Function. (IC302)

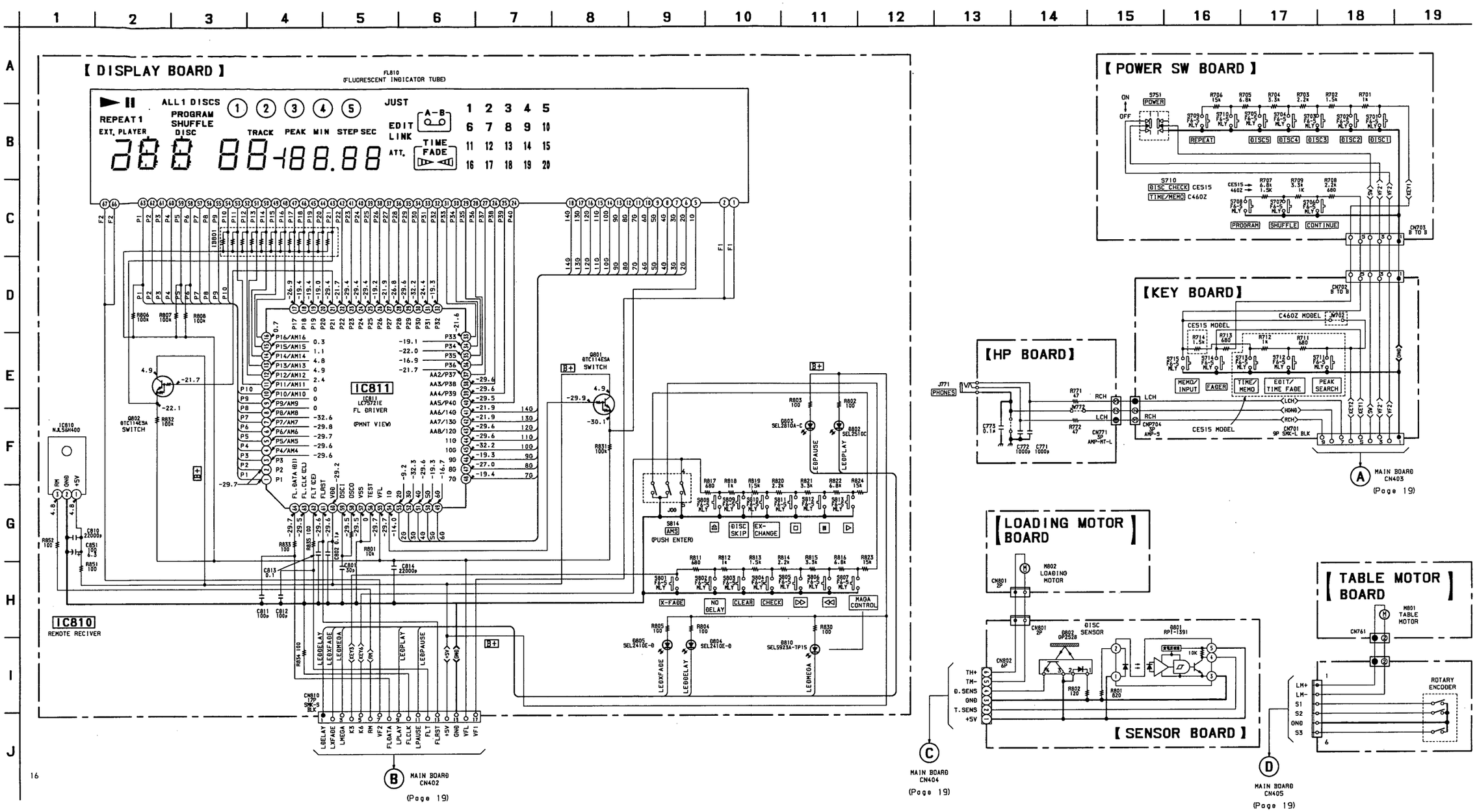


Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : Internal component.
- ▭ : Panel designation.
- B+ : B+ Line.
- B– : B– Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  No mark: STOP
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD
  ⇛ : CD (digital)

Note :	**Note :**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

4-6. SCHEMATIC DIAGRAM – DISPLAY SECTION –



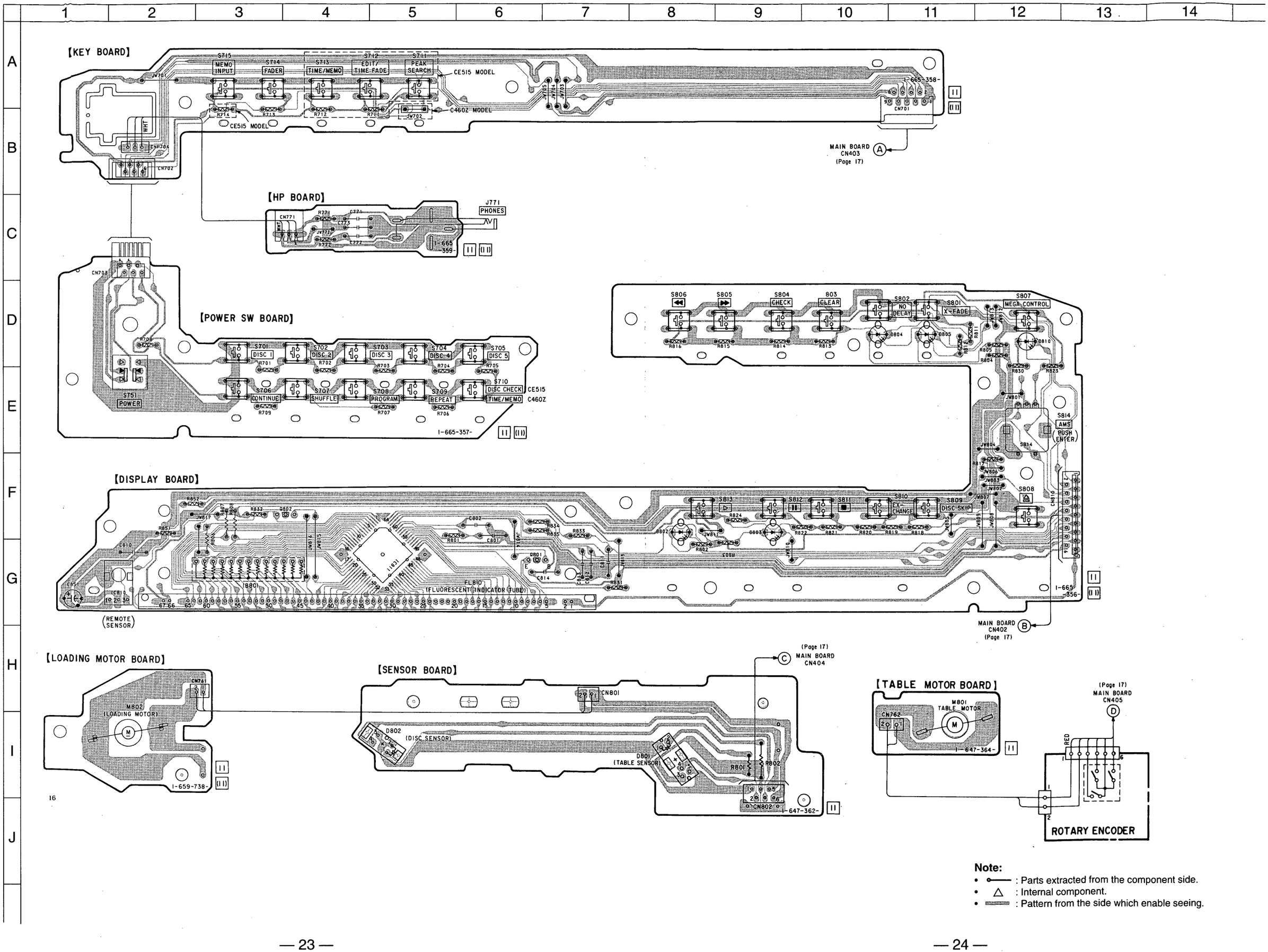
Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ :Internal component.
- ▭ :Panel designation.
- B+ : B+ Line.
- B– : B– Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  No mark: STOP
- Voltages are taken with a VOM (Input impedance 10MΩ).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.

Note :	**Note :**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

4-7. PRINTED WIRING BOARD – DISPLAY SECTION –

• See page 10 for Circuit Board Location.

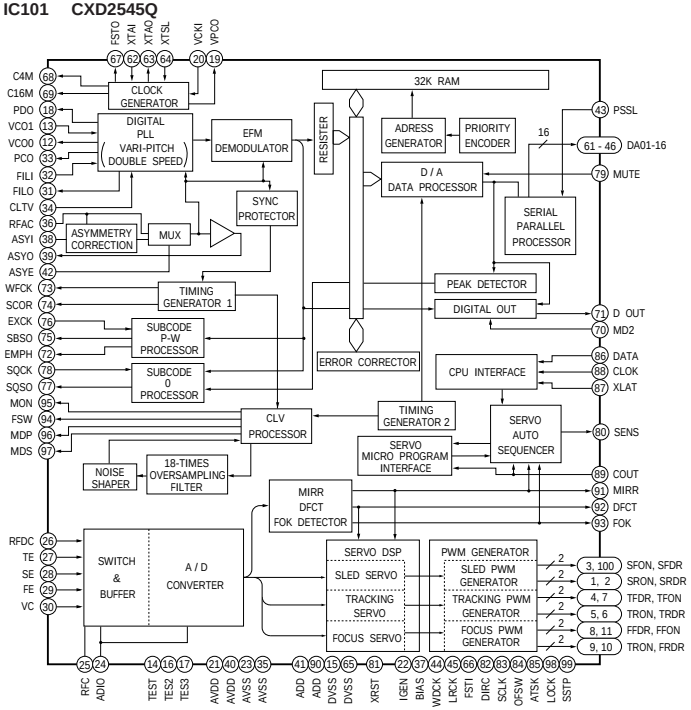


Note:

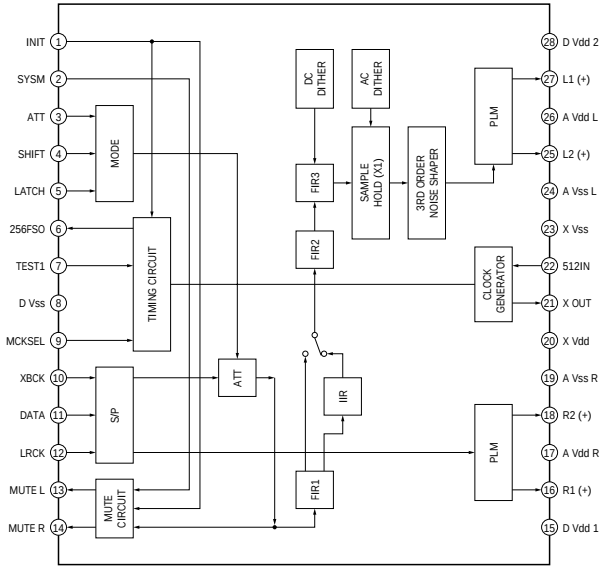
- ⟷ : Parts extracted from the component side.
- △ : Internal component.
- ▬ : Pattern from the side which enable seeing.

4-8. IC BLOCK DIAGRAMS

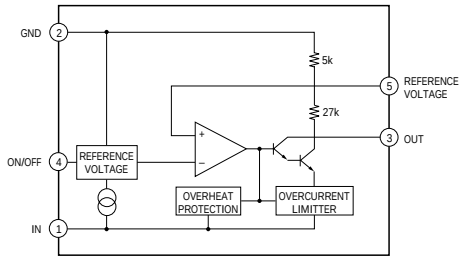
IC101 CXD2545Q



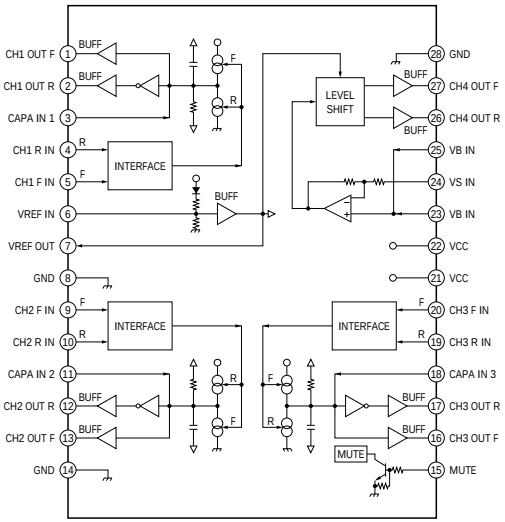
IC301 CXD8567AM



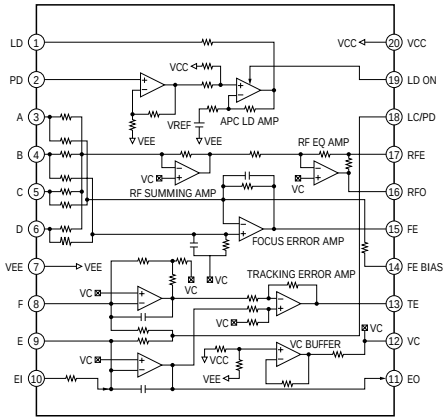
IC603 M5293L



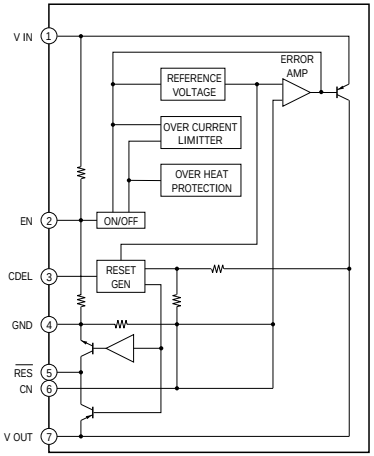
IC102 BA6392FP



IC103 CXA1821M



IC601 LA5602



4-9. IC PIN FUNCTIONS

• IC101 DIGITAL SIGNAL PROCESSOR (CXD2545Q)

Pin No.	Pin Name	I/O	Function
1	SRON	O	Sled drive output (Not used)
2	SRDR	O	Sled drive output
3	SFON	O	Sled drive output (Not used)
4	TFDR	O	Tracking drive output
5	TRON	O	Tracking drive output (Not used)
6	TRDR	O	Tracking drive output
7	TFON	O	Tracking drive output (Not used)
8	FFDR	O	Focus drive output
9	FRON	O	Focus drive output (Not used)
10	FRDR	O	Focus drive output
11	FFON	O	Focus drive output (Not used)
12	VCOO	O	VCO output for analog EFM PLL (Not used)
13	VCOI	I	VCO input for analog EFM PLL (Ground)
14	TEST	I	TEST pin connected normally to ground
15	DVss	—	Digital ground
16	TES2	I	TEST pin connected normally to ground
17	TES3	I	TEST pin connected normally to ground
18	PDO	O	Charge-pump output for analog EFM PLL (Not used)
19	VPCO	O	Charge-pump output for variable pitch PLL (Not used)
20	VCKI	I	Clock input from variable pitch external VCO (Ground)
21	AVD2	—	Analog power supply
22	IGEN	I	Power supply pin for operational amplifiers
23	AVS2	—	Analog ground
24	ADIO	I	(Not used)
25	RFC	O	(Not used)
26	RFDC	I	RF signal input
27	TE	I	Tracking error signal input
28	SE	I	Sled error signal input
29	FE	I	Focus error signal input
30	VC	I	Center voltage input pin
31	FILO	O	Filter output for master PLL
32	FILI	I	Filter input for master PLL
33	PCO	O	Charge-pump output for master PLL
34	CLTV	I	Control voltage input for master VCO
35	AVS1	—	Analog ground
36	RFAC	I	EFM signal input
37	BIAS	I	Asymmetry circuit constant current input
38	ASYI	I	Asymmetry comparate voltage input
39	ASYO	O	EFM full swing output
40	AVD1	—	Analog power supply

Pin No.	Pin Name	I/O	Function
41	DVDD	—	Digital power supply
42	ASYE	I	Asymmetry circuit ON/OFF
43	PSSL	I	Audio data output mode selection input
44	WDCK	O	48-bit slot D/A interface. Word clock.
45	LRCK	O	48-bit slot D/A interface. LR clock.
46	DATA	O	DA 16 output when PSSL=1.48-bit slot serial data when PSSL=0
47	BCLK	O	DA 15 output when PSSL=1.48-bit slot data when PSSL=0
48	64DATA	O	DA 14 output when PSSL=1.64-bit slot data when PSSL=0 (Not used)
49	64BCLK	O	DA 13 output when PSSL=1.64-bit slot data when PSSL=0 (Not used)
50	64LRCK	O	DA 12 output when PSSL=1.64-bit slot data when PSSL=0 (Not used)
51	GTOP	O	DA 11 output when PSSL=1.GTOP output when PSSL=0 (Not used)
52	XUGF	O	DA 10 output when PSSL=1.XUGF output when PSSL=0 (Not used)
53	XPLCK	O	DA 09 output when PSSL=1.XPLCK output when PSSL=0 (Not used)
54	GFS	O	DA 08 output when PSSL=1.GFS output when PSSL=0 (Not used)
55	RFCK	O	DA 07 output when PSSL=1.RFCK output when PSSL=0 (Not used)
56	C2PO	O	DA 06 output when PSSL=1.C2PO output when PSSL=0 (Not used)
57	XRAOF	O	DA 05 output when PSSL=1.XRA0F output when PSSL=0 (Not used)
58	MNT3	O	DA 04 output when PSSL=1.MNT3 output when PSSL=0 (Not used)
59	MNT2	O	DA 03 output when PSSL=1.MNT2 output when PSSL=0 (Not used)
60	MNT1	O	DA 02 output when PSSL=1.MNT1 output when PSSL=0 (Not used)
61	MNT0	O	DA 01 output when PSSL=1.MNT0 output when PSSL=0 (Not used)
62	XTAI	I	X'tal oscillator circuit input
63	XTAO	O	X'tal oscillator circuit output (Not used)
64	XTSL	I	X'tal selection input pin (Ground)
65	DVss	—	Digital ground
66	FSTI	I	2/3 divider input of pins 62, 63
67	FSTO	O	2/3 divider output of pins 62, 63
68	FSOF	O	(Not used)
69	C16M	O	16.9344 MHz output (Not used)
70	MD2	I	Digital-out ON/OFF control pin (+5V)
71	DOUT	O	Digital-out output pin
72	EMPH	O	Playback disc output in emphasis mode (Not used)
73	WFCK	O	WFCK output
74	SCOR	O	Sub-code sync output
75	SBSO	O	Sub-P through Sub-W serial output
76	EXCK	I	Clock input for SBS0 read-out (Ground)
77	SUBQ	O	Sub-Q 80-bit output
78	SQCK	O	Sub-code Q clock output
79	MUTE	I	Muting selection pin
80	SENS	O	SENS output

Pin No.	Pin Name	I/O	Function
81	XRST	I	System reset
82	DIRC	I	Used in 1-track jump mode (+5v)
83	SCLK	I	SENS serial data read-out clock
84	DFSW	I	DFCT selection pin (Ground)
85	ATSK	I	Input pin for anti-shock (Ground)
86	DATA	I	Serial data input, supplied from CPU
87	XLAT	I	Latch input, supplied from CPU
88	CLOK	I	Serial data transfer clock input, supplied from CPU
89	COUT	O	Numbers of track counted signal output (Not used)
90	DV_{DD}	—	Digital power supply
91	MIRR	O	Mirror signal output (Not used)
92	DFCT	O	Defect signal output (Not used)
93	FOK	O	Focus OK output (Not used)
94	FSW	O	Output to select spindle motor output filter (Not used)
95	MON	O	Output to control ON/OFF of spindle motor (Not used)
96	MDP	O	Output to control spindle motor servo
97	MDS	O	Output to control spindle motor servo (Not used)
98	LOCK	O	GFS is sampled by 460 Hz. H when GFS is H (Not used)
99	SSTP	I	Input signal to detect disc inner most track
100	SFDR	O	Sled drive output

• IC302 SYSTEM CONTROL (CXP84340-060Q)

Pin No.	Pin Name	I/O	Function
1	D3	I/O	SRAM data 3
2	D4	I/O	SRAM data 4
3	D2	I/O	SRAM data 2
4	D1	I/O	SRAM data 1
5	D0	I/O	SRAM data 0
6	A8	O	SRAM address 8
7	A7	O	SRAM address 7
8	A6	O	SRAM address 6
9	A5	O	SRAM address 5
10	A4	O	SRAM address 4
11	A3	O	SRAM address 3
12	A2	O	SRAM address 2
13	A1	O	SRAM address 1
14	PLAY_L	O	PLAY lamp
15	PAUSE_L	O	PAUSE lamp
16	MEGA_L	O	MEGA lamp
17	XFADE_	O	XFADE lamp
18	MODELAY_L	O	NO DELAY lamp
19	WE	O	SRAM enable
20	LODIN	O	Loading direction signal input
21	LODOUT	O	Loading direction signal output
22	FLCKL	O	Display clock
23	FLDATA	O	Display data
24	BLK	O	Display reset
25	A13	—	SRAM address 13
26	A14	—	SRAM address 14
27	NC	—	Not used.
28	D.SENS	I	Disc exist/non-exist sensor
29	NC	—	Not used.
30	RESET	I	Microprocessor reset
31	10MHz	—	Ceramic oscillator
32	10MHz	—	Ceramic oscillator
33	GND	—	Ground (0V)
34	NC	—	Not used.
35	NC	—	Not used.
36	NC	—	Not used.
37	NC	—	Not used.
38	BUSOUT	O	Control A1 output
39	VER	I	Model selection
40	KEY6	I	Key input 6

Pin No.	Pin Name	I/O	Function
41	KEY3	I	Key input 3
42	CD123	I	Command mode switch
43	KEY2	I	Key input 2
44	KEY1	I	Key input 1
45	TEST	I	Test mode terminal
46	SENSOR	I	Table sensor
47	FLT	O	Display latch
48	CLK	O	Command clock
49	LDON	O	Laser diode ON
50	DATA	O	Command data
51	SQCLK	O	Sub-Q clock
52	SUBQ	I	Sub-Q data
53	PRGL	O	Digital filter latch
54	SENSE	I	Sense
55	NC	—	Not used.
56	RMIN	I	Command latch
57	NC	—	Not used.
58	XLT	—	Remote control signal input
59	AMUTE	O	Audio system mute
60	DQSY	I	CD-TEXT sync signal
61	SCOR	I	Sub-Q sync signal
62	BUSIN	I	Control-A input
63	TCLK	O	CD-TEXT clock
64	SMUTE	O	2nd input mute
65	TDATA	I	CD-TEXT data
66	ENC1	I	Loading encoder 1
67	ENC2	I	Loading encoder 2
68	ENC3	I	Loading encoder 3
69	TBLL	O	Rotation direction of table-L
70	TBLR	O	Rotation direction of table-R
71	A0	O	SRAM address 0
72	+5V	—	Microprocessor power supply (5V)
73	+5V	—	Microprocessor power supply (5V)
74	A12	O	SRAM address 12
75	A11	O	SRAM address 11
76	A10	O	SRAM address 10
77	A9	O	SRAM address 9
78	D7	I/O	SRAM data 7
79	D6	I/O	SRAM data 6
80	D5	I/O	SRAM data 5

SECTION 5
EXPLODED VIEWS

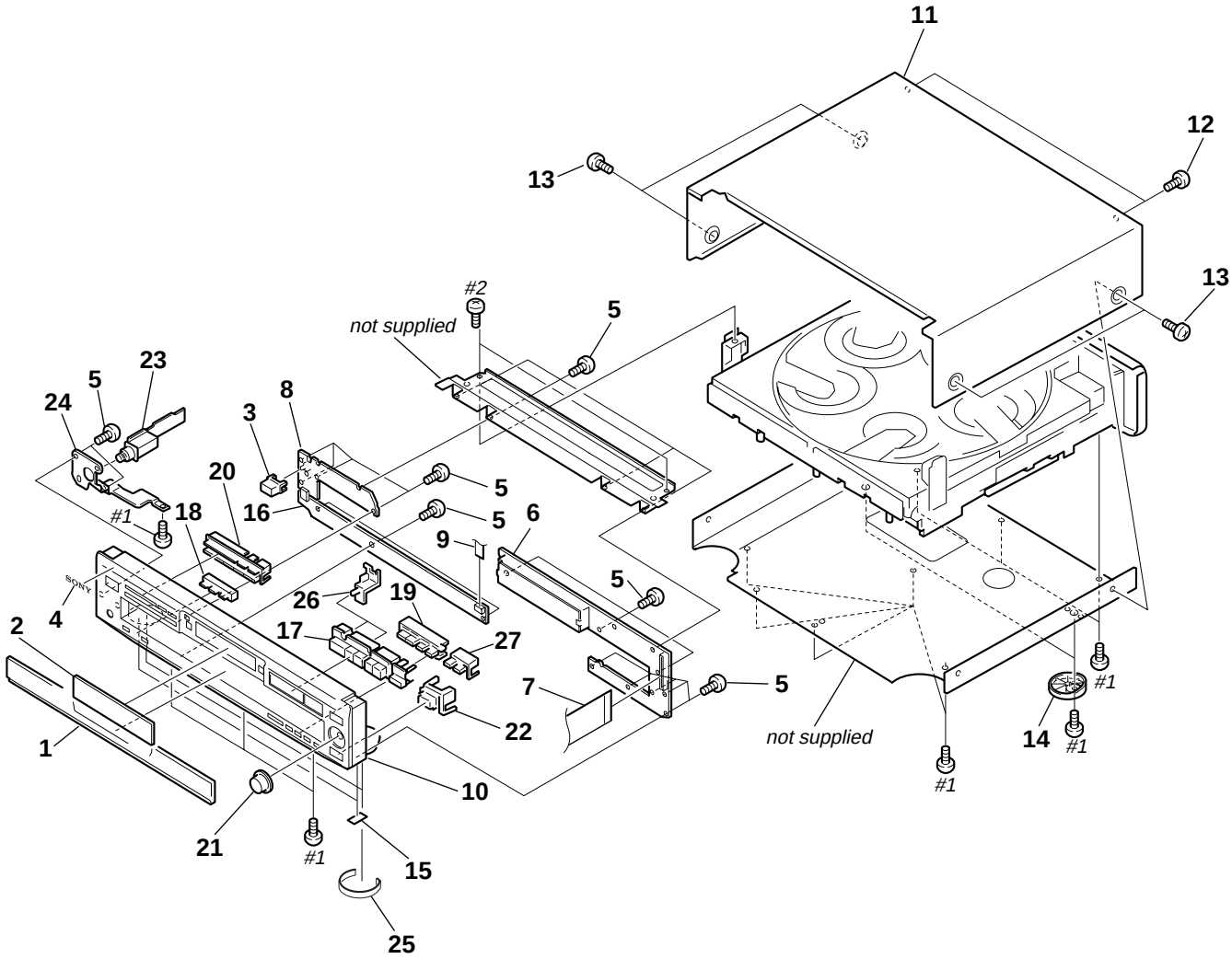
NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (#mark) list is given in the last of this parts list.
- Abbreviation
  AUS : Australian
  CND : Canadian

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

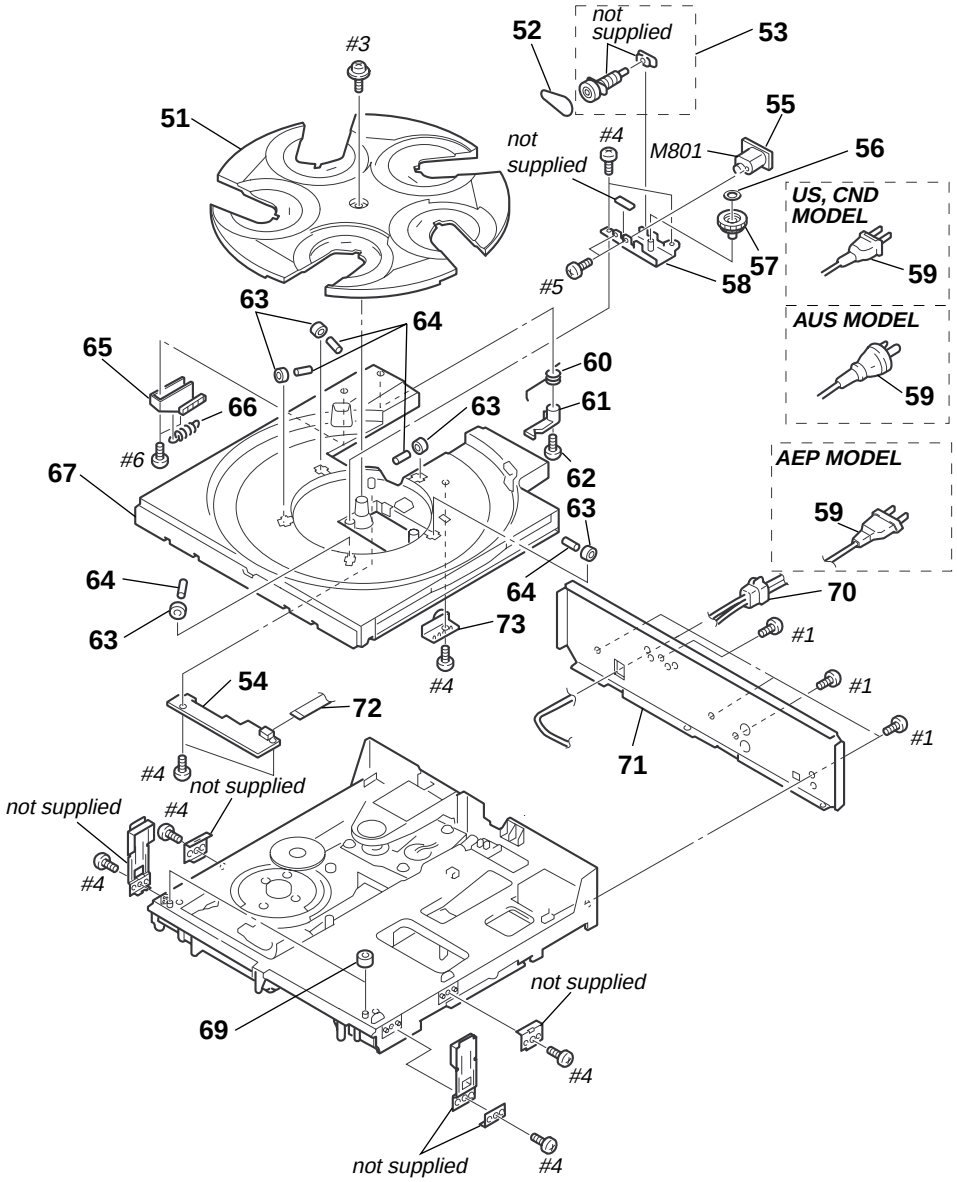
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifie.

5-1. FRONT PANEL AND CASE SECTION



Ref. No.	Part No.	Description	Remarks
1	4-987-780-11	PANEL, LOADING	
2	4-987-779-11	WINDOW (FL)	
3	4-977-589-01	BUTTON (POWER)	
4	3-008-600-01	EMBLEM (5-AR), SONY	
5	4-951-620-01	SCREW (2.6X8), +BVTP	
* 6	A-4699-620-A	DISPLAY BOARD, COMPLETE	
7	1-782-219-11	WIRE (FLAT TYPE) (17 CORE)	
* 8	1-665-357-11	POWER SW BOARD	
9	1-782-220-11	WIRE (FLAT TYPE) (9 CORE)	
10	4-987-773-51	PANEL, FRONT (CE515)	
10	4-987-773-61	PANEL, FRONT (C460Z)	
* 11	4-978-492-11	CASE	
12	3-703-685-21	SCREW (+BV 3X8)	
13	3-704-366-01	SCREW (CASE) (M3X8)	
14	X-4946-618-1	FOOT ASSY (US,CND)	
14	X-4946-641-1	FOOT ASSY (AEP,AUS)	
* 15	4-978-398-21	CUSHION	
* 16	1-665-358-11	KEY BOARD	
17	4-987-775-11	BUTTON (PLAY)	
18	4-987-776-01	BUTTON (FUNC)	
19	4-987-777-01	BUTTON (FF)	
20	4-987-774-01	BUTTON (MODE)	
21	4-987-994-01	KNOB (AMS)	
22	4-987-778-01	BUTTON (MEGA-CON)	
* 23	1-665-359-11	HP BOARD	
* 24	4-979-090-01	BRACKET (HP)	
25	4-977-593-01	RING (DIA. 50), ORNAMENTAL(AEP,AUS)	
26	4-989-723-01	INDICATOR (PLAY)	
27	4-989-725-01	BUTTON (X-FADE)	

5-2. BACK PANEL AND DISC TABLE SECTION

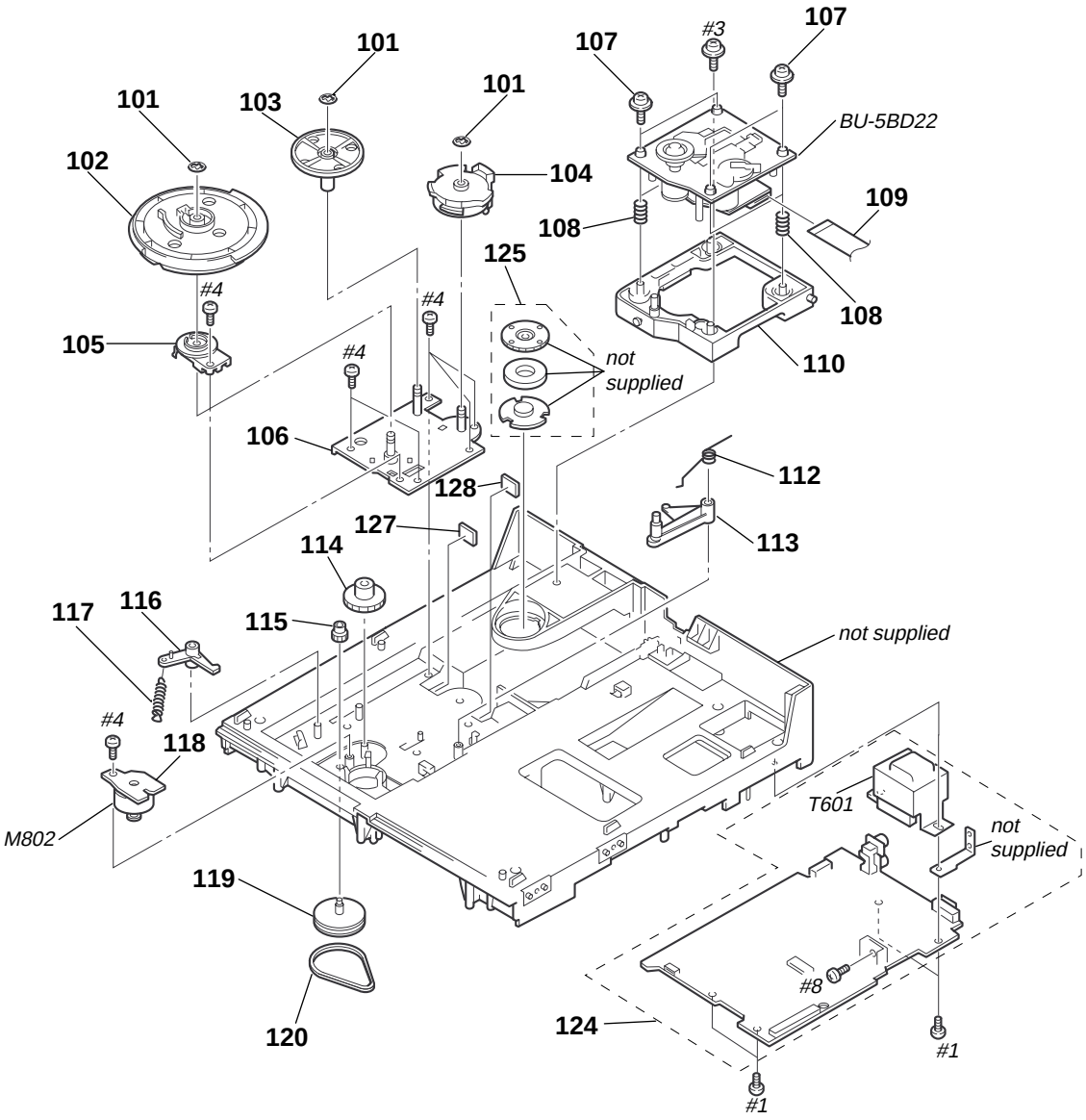


Ref. No.	Part No.	Description	Remarks
51	4-957-299-11	TABLE (B), DISC	
52	4-957-304-01	BELT (RM)	
53	X-4943-479-1	GEAR (ROTARY A) ASSY	
* 54	1-647-362-11	SENSOR BOARD	
* 55	1-647-364-11	TABLE MOTOR BOARD	
56	3-325-697-01	WASHER	
57	4-957-284-01	GEAR (ROTARY B)	
58	X-4943-477-1	BRACKET (RM) ASSY	
⚠59	1-575-651-21	CORD, POWER (AEP)	
⚠59	1-590-926-11	CORD, POWER (US,CND)	
⚠59	1-696-845-11	CORD, POWER (AUS)	
60	4-957-293-01	SPRING (RACK RELEASE)	
61	4-957-291-11	LEVER (RACK RELEASE)	
62	4-957-868-01	SCREW (+PTPWH 2.6X20)	

Ref. No.	Part No.	Description	Remarks
63	4-988-162-01	ROLLER	
64	4-934-376-01	SHAFT (ROLLER)	
65	4-957-292-11	SLIDER (RACK)	
66	4-957-294-01	SPRING (D.T), TENSION	
67	4-957-298-01	TABLE (A), DISC	
* 69	4-951-619-01	CUSHION (A)	
* 70	3-703-244-00	BUSHING (2104), CORD	
* 71	4-987-842-01	PANEL, BACK (CE515:US)	
* 71	4-987-842-11	PANEL, BACK (CE515:CND)	
* 71	4-987-842-21	PANEL, BACK (CE515:AEP)	
* 71	4-987-842-31	PANEL, BACK (C460Z:US)	
* 71	4-987-842-51	PANEL, BACK (CE515:AUS	
72	1-751-052-11	WIRE (FLAT TYPE) (6 CORE)	
73	X-4943-480-1	BRACKET (ROLLER D) ASSY	
M801	A-4660-525-A	MOTOR ASSY, ROTARY (TABLE)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

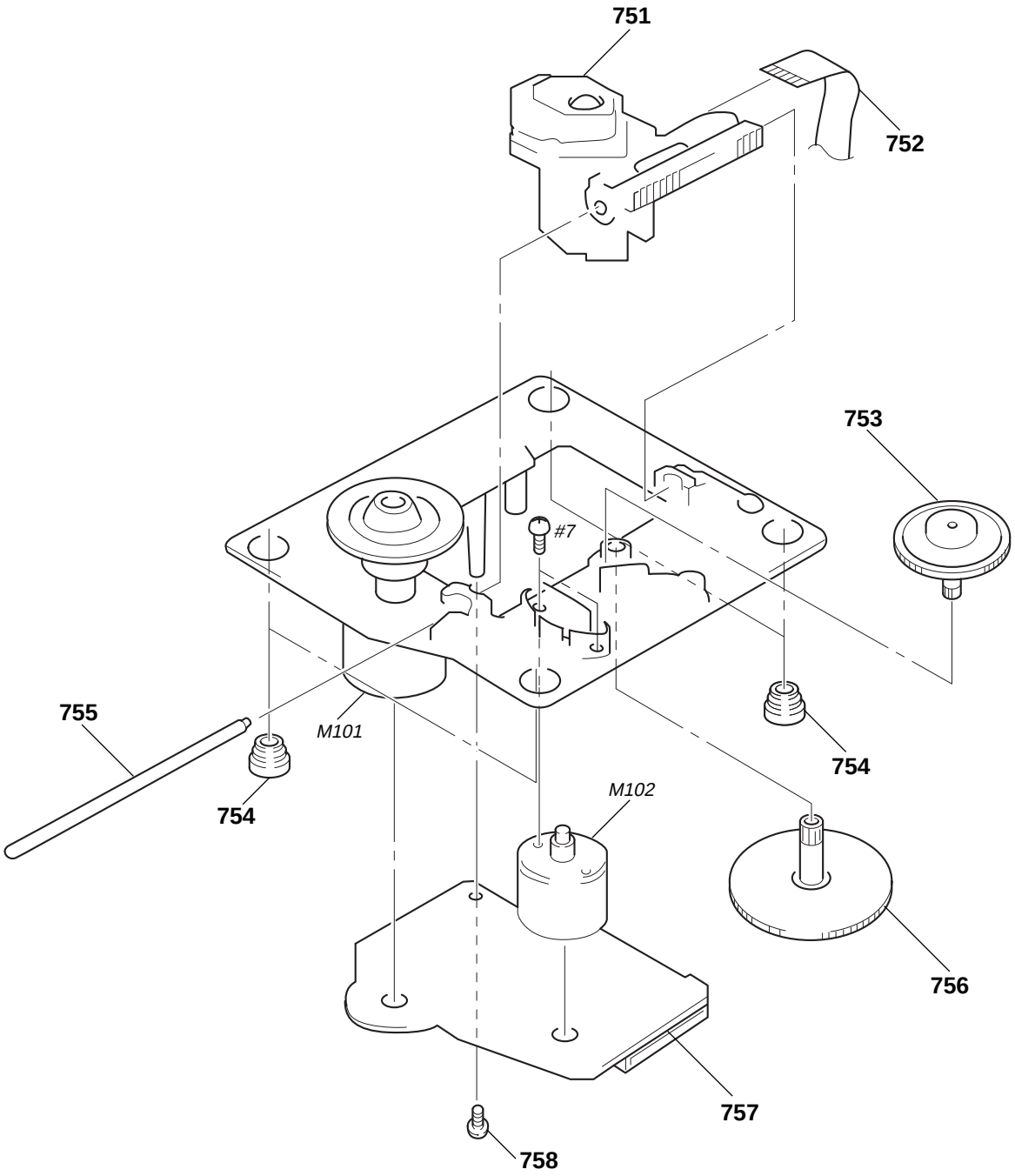
5-3. CHASSIS SECTION



Ref. No.	Part No.	Description	Remarks
101	4-957-283-01	WASHER (5), STOPPER	
102	4-957-288-01	GEAR (MAIN)	
103	4-957-287-01	GEAR (REV)	
104	4-957-286-01	GEAR (U/D)	
105	1-466-996-11	ENCODER, ROTARY	
106	X-4946-195-1	BRACKET (GEAR) ASSY	
107	4-933-134-01	SCREW (+PTPWH M2.6X6)	
108	4-948-503-01	SPRING (BU), COMPRESSION	
109	1-765-443-11	WIRE (FLAT TYPE) (23 CORE)	
110	4-957-289-12	HOLDER (BU)	
112	4-957-281-01	SPRING (LOCK LEVER)	
113	4-957-279-11	LEVER, LOCK	
114	4-957-303-01	GEAR (LOADING C)	
115	4-934-375-01	GEAR (LOADING B)	
116	4-957-285-01	LEVER, SET	
117	4-962-087-01	SPRING (S), TENSION	
* 118	1-659-738-11	LOADING MOTOR BOARD	
119	X-4941-529-1	PULLEY ASSY	
120	4-944-490-01	BELT (TIMING)	
* 124	A-4699-623-A	MAIN BOARD, COMPLETE (CE515:US,CND)	
* 124	A-4699-626-A	MAIN BOARD, COMPLETE (CE515:AEP,AUS)	
* 124	A-4699-629-A	MAIN BOARD, COMPLETE (C460Z)	
* 125	1-452-879-11	MAGNET	
* 127	4-981-731-01	CUSHION (U/D)	
* 128	4-981-731-11	CUSHION (U/D)	
M802	A-4660-914-A	MOTOR ASSY, LOADING	
⚠T601	1-429-956-11	TRANSFORMER, POWER (US,CND)	
⚠T601	1-431-076-11	TRANSFORMER, POWER (AEP,AUS)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifie.

5-4. BASE UNIT SECTION (BU-5BD22)



Ref. No.	Part No.	Description	Remarks
⚠751	8-848-379-31	OPTICAL PICK-UP KSS-213BA/F-NP	
752	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
753	4-917-567-21	GEAR (M)	
754	4-951-940-01	INSULATOR (BU)	
755	4-917-565-01	SHAFT, SLED	
756	4-917-564-01	GEAR (P), FLATNESS	
* 757	A-4699-624-A	BD BOARD, COMPLETE	
758	4-951-620-01	SCREW (2.6X8), +BVTP	
M101	X-4917-523-3	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-3	MOTOR ASSY (SLED)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SECTION 6
ELECTRICAL PARTS LIST

BD

NOTE:

When indicating parts by reference number, please include the board naame.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifie.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... ,
  uPB... , µPB... , uPC... , µPC... ,
  uPD..., µPD...
- Abbreviation
  AUS : Australian
  CND : Canadian

Ref. No.	Part No.	Description			Remarks
*	A-4699-624-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C102	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C103	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C105	1-135-155-21	TANTALUM CHIP	4.7uF	10%	16V
C106	1-164-346-11	CERAMIC CHIP	1uF		16V
C107	1-164-346-11	CERAMIC CHIP	1uF		16V
C108	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C109	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C110	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C111	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C112	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C113	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C114	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C115	1-126-607-11	ELECT CHIP	47uF	20%	4V
C116	1-126-607-11	ELECT CHIP	47uF	20%	4V
C117	1-126-209-11	ELECT	100uF	20%	4V
C118	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C119	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C120	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C123	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C124	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C140	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C141	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C151	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C153	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C154	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C156	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C157	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C159	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C161	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN101	1-770-072-11	CONNECTOR,(LIF(NON-ZIF))FFC23P			
CN102	1-770-014-11	CONNECTOR, FFC/FPC 16P			
		< IC >			
IC101	8-752-369-78	IC CXD2545Q			
IC102	8-759-176-09	IC BA6392FP			
IC103	8-752-072-45	IC CXA1821M			
IC104	8-759-428-57	IC LC89170M-TLM			

Ref. No.	Part No.	Description			Remarks
		< TRANSISTOR >			
Q101	8-729-010-08	TRANSISTOR MSB710-R			
		< RESISTOR >			
R101	1-216-077-00	METAL CHIP	15K	5%	1/10W
R102	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R103	1-216-077-00	METAL CHIP	15K	5%	1/10W
R104	1-216-085-00	METAL CHIP	33K	5%	1/10W
R105	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R107	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R108	1-216-073-00	METAL CHIP	10K	5%	1/10W
R109	1-216-121-00	METAL GLAZE	1M	5%	1/10W
R110	1-216-025-00	METAL GLAZE	100	5%	1/10W
R112	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R113	1-216-295-00	CONDUCTOR, CHIP (2012)			
R114	1-216-073-00	METAL CHIP	10K	5%	1/10W
R115	1-216-295-00	CONDUCTOR, CHIP (2012)			
R123	1-216-073-00	METAL CHIP	10K	5%	1/10W
R124	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R125	1-216-037-00	METAL CHIP	330	5%	1/10W
R126	1-216-037-00	METAL CHIP	330	5%	1/10W
R127	1-216-037-00	METAL CHIP	330	5%	1/10W
R131	1-216-037-00	METAL CHIP	330	5%	1/10W
R135	1-216-295-00	CONDUCTOR, CHIP (2012)			
R136	1-216-295-00	CONDUCTOR, CHIP (2012)			
R137	1-216-295-00	CONDUCTOR, CHIP (2012)			
R138	1-216-295-00	CONDUCTOR, CHIP (2012)			
R141	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R142	1-216-081-00	METAL CHIP	22K	5%	1/10W
R143	1-216-101-00	METAL CHIP	150K	5%	1/10W
R144	1-216-101-00	METAL CHIP	150K	5%	1/10W
R146	1-216-073-00	METAL CHIP	10K	5%	1/10W
R147	1-216-081-00	METAL CHIP	22K	5%	1/10W
R148	1-216-001-00	METAL CHIP	10	5%	1/10W
R149	1-216-003-11	METAL GLAZE	12	5%	1/10W
R158	1-216-111-00	METAL GLAZE	390K	5%	1/10W
R159	1-216-101-00	METAL CHIP	150K	5%	1/10W
R161	1-216-308-00	METAL CHIP	4.7	5%	1/10W
R162	1-216-101-00	METAL CHIP	150K	5%	1/10W
		< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT)			
**********					

Ref. No.	Part No.	Description			Remarks
*	A-4699-620-A	DISPLAY BOARD, COMPLETE			
		**********			
*	3-362-478-11	HOLDER (T), LED			
*	4-989-724-01	HOLDER (FL)			
		< CAPACITOR >			
C801	1-162-210-31	CERAMIC	30PF	5%	50V
C802	1-164-159-11	CERAMIC	0.1uF		50V
C810	1-161-494-00	CERAMIC	0.022uF		25V
C811	1-162-282-31	CERAMIC	100PF	10%	50V
C812	1-162-282-31	CERAMIC	100PF	10%	50V
C813	1-164-159-11	CERAMIC	0.1uF		50V
C814	1-161-494-00	CERAMIC	0.022uF		25V
C851	1-126-968-11	ELECT	100uF	20%	6.3V
		< CONNECTOR >			
* CN810	1-568-836-11	SOCKET, CONNECTOR 17P			
		< DIODE >			
D802	8-719-303-00	DIODE SEL2510C (▷)			
D803	8-719-301-52	DIODE SEL2810A-C (▮▮)			
D804	8-719-301-44	DIODE SEL2410E-D (NO DELAY)			
D805	8-719-301-44	DIODE SEL2410E-D (X-FADE)			
D810	8-719-057-97	DIODE SEL5923A-TP15 (MEGA CONTROL)			
		< FILTER >			
FL810	1-517-664-11	INDICATOR TUBE, FLUORESCENT			
		< COMPOSITION CIRCUIT BLOCK >			
IB801	1-232-362-00	COMPOSITION CIRCUIT BLOCK			
		< IC >			
IC810	8-759-459-84	IC NJL56H400			
IC811	8-759-337-52	IC LC75721E			
		< TRANSISTOR >			
Q801	8-729-029-67	TRANSISTOR DTC114ESA-TP			
Q802	8-729-029-67	TRANSISTOR DTC114ESA-TP			
		< RESISTOR >			
R801	1-249-429-11	CARBON	10K	5%	1/4W
R802	1-247-807-31	CARBON	100	5%	1/4W F
R803	1-247-807-31	CARBON	100	5%	1/4W F
R804	1-247-807-31	CARBON	100	5%	1/4W F
R805	1-247-807-31	CARBON	100	5%	1/4W F
R806	1-249-441-11	CARBON	100K	5%	1/4W
R807	1-249-441-11	CARBON	100K	5%	1/4W
R808	1-249-441-11	CARBON	100K	5%	1/4W
R811	1-249-415-11	CARBON	680	5%	1/4W F
R812	1-249-417-11	CARBON	1K	5%	1/4W F
R813	1-249-419-11	CARBON	1.5K	5%	1/4W F
R814	1-249-421-11	CARBON	2.2K	5%	1/4W F
R815	1-247-843-11	CARBON	3.3K	5%	1/4W
R816	1-249-427-11	CARBON	6.8K	5%	1/4W F
R817	1-249-415-11	CARBON	680	5%	1/4W F
R818	1-249-417-11	CARBON	1K	5%	1/4W F
R819	1-249-419-11	CARBON	1.5K	5%	1/4W F
R820	1-249-421-11	CARBON	2.2K	5%	1/4W F

Ref. No.	Part No.	Description			Remarks
R821	1-247-843-11	CARBON	3.3K	5%	1/4W
R822	1-249-427-11	CARBON	6.8K	5%	1/4W F
R823	1-249-431-11	CARBON	15K	5%	1/4W
R824	1-249-431-11	CARBON	15K	5%	1/4W
R830	1-247-807-31	CARBON	100	5%	1/4W F
R831	1-249-441-11	CARBON	100K	5%	1/4W
R832	1-249-441-11	CARBON	100K	5%	1/4W
R833	1-247-807-31	CARBON	100	5%	1/4W
R834	1-247-807-31	CARBON	100	5%	1/4W
R835	1-247-807-31	CARBON	100	5%	1/4W
R851	1-247-807-31	CARBON	100	5%	1/4W
R852	1-247-807-31	CARBON	100	5%	1/4W
		< SWITCH >			
S801	1-554-303-21	SWITCH, TACTILE (X-FADE)			
S802	1-554-303-21	SWITCH, TACTILE (NO DELAY)			
S803	1-554-303-21	SWITCH, TACTILE (CLEAR)			
S804	1-554-303-21	SWITCH, TACTILE (CHECK)			
S805	1-554-303-21	SWITCH, TACTILE (▶▶)			
S806	1-554-303-21	SWITCH, TACTILE (◀◀)			
S807	1-554-303-21	SWITCH, TACTILE (MEGA CONTROL)			
S808	1-554-303-21	SWITCH, TACTILE (OPEN/CLOSE)			
S809	1-554-303-21	SWITCH, TACTILE (DISC SKIP)			
S810	1-554-303-21	SWITCH, TACTILE (EX-CHANGE)			
S811	1-554-303-21	SWITCH, TACTILE (■)			
S812	1-554-303-21	SWITCH, TACTILE (▮▮)			
S813	1-554-303-21	SWITCH, TACTILE (▷)			
S814	1-473-957-11	ENCODER, ROTARY (AMS)			
**********					
*	1-665-359-11	HP BOARD			
		*********			
		< CAPACITOR >			
C771	1-162-294-31	CERAMIC	0.001uF	10%	50V
C772	1-162-294-31	CERAMIC	0.001uF	10%	50V
C773	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
* CN771	1-568-941-11	PIN, CONNECTOR 3P			
		< JACK >			
J771	1-568-519-41	JACK, LARGE TYPE (PHONES)			
		< RESISTOR >			
R771	1-249-401-11	CARBON	47	5%	1/4W F
R772	1-249-401-11	CARBON	47	5%	1/4W F
**********					
*	1-665-358-11	KEY BOARD			
		**********			
		< CONNECTOR >			
* CN701	1-568-852-11	SOCKET, CONNECTOR 9P			
CN702	1-750-195-11	CONNECTOR, BOARD TO BOARD 6P			

KEY | LOADING MOTOR | MAIN

Ref. No.	Part No.	Description			Remarks
		< RESISTOR >			
R711	1-249-415-11	CARBON	680	5%	1/4W F (CE515)
R712	1-249-417-11	CARBON	1K	5%	1/4W F (CE515)
R713	1-249-415-11	CARBON	680	5%	1/4W F
R714	1-249-419-11	CARBON	1.5K	5%	1/4W F (CE515)
		< SWITCH >			
S711	1-554-303-21	SWITCH, TACTILE (PEAK SEARCH)(CE515)			
S712	1-554-303-21	SWITCH, TACTILE (EDIT/TIME FADE)(CE515)			
S713	1-554-303-21	SWITCH, TACTILE (TIME)(CE515)			
S714	1-554-303-21	SWITCH, TACTILE (TIME/MEMO)			
S715	1-554-303-21	SWITCH, TACTILE (MEMO INPUT)			
**********					
*	1-659-738-11	LOADING MOTOR BOARD			
		**********			
		< MOTOR >			
M802	A-4660-914-A	MOTOR ASSY, LOADING			
**********					
*	A-4699-629-A	MAIN BOARD, COMPLETE (C460Z)			
		**********			
*	A-4699-626-A	MAIN BOARD, COMPLETE (CE515:AEP,AUS)			
		**********			
*	A-4699-623-A	MAIN BOARD, COMPLETE (CE515:US,CND)			
		**********			
	7-685-871-01	SCREW +BVTT 3X6 (S)			
		< CAPACITOR >			
C301	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C302	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C303	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C305	1-124-443-00	ELECT	100uF	20%	10V
C306	1-124-442-00	ELECT	330uF	20%	6.3V
C311	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C317	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C321	1-110-489-11	CAPACITOR	1F		5.5V
C322	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C332	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C371	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C372	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C373	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C374	1-104-664-11	ELECT	47uF	20%	16V
C376	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C381	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C401	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C402	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C403	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C404	1-106-359-00	MYLAR	4700PF	5%	200V
C405	1-130-472-00	MYLAR	0.0012uF	5%	50V
C406	1-124-443-00	ELECT	100uF	20%	10V
C407	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C408	1-104-664-11	ELECT	47uF	20%	16V
C410	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C411	1-104-665-11	ELECT	100uF	20%	16V
C412	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C451	1-124-907-11	ELECT	10uF	20%	50V
C501	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C502	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C503	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C504	1-106-359-00	MYLAR	4700PF	5%	200V
C505	1-130-472-00	MYLAR	0.0012uF	5%	50V
C506	1-124-443-00	ELECT	100uF	20%	10V
C507	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C508	1-104-664-11	ELECT	47uF	20%	16V
C509	1-126-962-11	ELECT	3.3uF	20%	50V
C510	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C511	1-104-665-11	ELECT	100uF	20%	16V
C512	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C551	1-124-907-11	ELECT	10uF	20%	50V
C602	1-126-944-11	ELECT	3300uF	20%	16V
C603	1-126-942-61	ELECT	1000uF	20%	16V
C604	1-126-963-11	ELECT	4.7uF	20%	50V
C605	1-126-963-11	ELECT	4.7uF	20%	50V
C606	1-126-963-11	ELECT	4.7uF	20%	50V
C607	1-126-941-11	ELECT	470uF	20%	6.3V
C608	1-104-666-11	ELECT	220uF	20%	10V
C609	1-124-918-11	ELECT	47uF	20%	63V
C610	1-124-907-11	ELECT	10uF	20%	50V
C614	1-104-665-11	ELECT	100uF	20%	16V
C616	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C619	1-104-664-11	ELECT	47uF	20%	16V
C620	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C622	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C624	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C625	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C626	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C628	1-104-664-11	ELECT	47uF	20%	16V
C648	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C649	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C651	1-104-664-11	ELECT	47uF	20%	16V
		< CONNECTOR >			
CN401	1-750-640-11	CONNECTOR, FFC/FPC 23P			
CN402	1-568-860-11	SOCKET, CONNECTOR 17P			
* CN403	1-568-852-11	SOCKET, CONNECTOR 9P			
* CN404	1-568-825-11	SOCKET, CONNECTOR 6P			
* CN601	1-573-047-11	PIN, CONNECTOR (PC BOARD) 2P			
		< DIODE >			
D302	8-719-016-74	DIODE 1SS352			
D321	8-719-016-74	DIODE 1SS352			
D381	8-719-016-74	DIODE 1SS352			
D601	8-719-210-33	DIODE EC10DS2			
D602	8-719-210-33	DIODE EC10DS2			
D603	8-719-210-33	DIODE EC10DS2			
D604	8-719-210-33	DIODE EC10DS2			
D605	8-719-210-33	DIODE EC10DS2			
D606	8-719-977-22	DIODE DTZ9.1			
D608	8-719-016-74	DIODE 1SS352			
D609	8-719-976-96	DIODE DTZ4.7C			
		< TERMINAL >			
EB601	1-537-770-21	TERMINAL BOARD, GROUND			

Ref. No.	Part No.	Description	Remarks
		< IC >	
IC301	8-759-362-47	IC CXD8567AM	
IC302	8-752-886-46	IC CXP84340-060Q	
IC303	8-759-374-72	IC LC35256AM-10	
IC304	8-759-356-03	IC BA6780	
IC305	8-759-636-55	IC M5218AFP	
IC371	8-749-921-12	IC GP1F32T (DIGITAL OUT)	
IC401	8-759-100-96	IC uPC4558G2	
IC402	8-759-100-96	IC uPC4558G2	
IC501	8-759-100-96	IC uPC4558G2	
IC502	8-759-100-96	IC uPC4558G2	
IC601	8-759-061-65	IC LA5602	
IC602	8-749-011-78	IC BA17807T	
IC603	8-759-633-42	IC M5293L	
		< JACK >	
J301	1-770-720-11	JACK, PIN 4P (LINE IN/OUT)	
J381	1-774-726-11	JACK (CONTROL A1)	
		< COIL >	
L301	1-410-375-11	INDUCTOR CHIP 3.3uH	
L303	1-410-375-11	INDUCTOR CHIP 3.3uH	
L304	1-410-375-11	INDUCTOR CHIP 3.3uH	
L305	1-410-397-21	FERRITE BEAD INDUCTOR	
L307	1-410-375-11	INDUCTOR CHIP 3.3uH	
L308	1-414-234-11	INDUCTOR, FERRITE BEAD	
L309	1-414-234-11	INDUCTOR, FERRITE BEAD	
L310	1-414-234-11	INDUCTOR, FERRITE BEAD	
L401	1-410-375-11	INDUCTOR CHIP 3.3uH	
L501	1-410-375-11	INDUCTOR CHIP 3.3uH	
L601	1-414-234-11	INDUCTOR, FERRITE BEAD	
L603	1-414-234-11	INDUCTOR, FERRITE BEAD	
L604	1-216-295-00	CONDUCTOR, CHIP (2012)	
L605	1-216-296-00	CONDUCTOR, CHIP (3216)	
L606	1-410-397-21	FERRITE BEAD INDUCTOR	
L607	1-410-375-11	INDUCTOR CHIP 3.3uH	
L608	1-410-375-11	INDUCTOR CHIP 3.3uH	
L609	1-216-295-00	CONDUCTOR, CHIP (2012)	
		< TRANSISTOR >	
Q201	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q301	8-729-029-67	TRANSISTOR DTC114ESA-TP	
Q302	8-729-029-67	TRANSISTOR DTC114ESA-TP	
Q303	8-729-029-67	TRANSISTOR DTC114ESA-TP	
Q304	8-729-029-67	TRANSISTOR DTC114ESA-TP	
Q305	8-729-029-67	TRANSISTOR DTC114ESA-TP	
Q311	8-729-900-53	TRANSISTOR DTC114EK	
Q321	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q322	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q381	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q402	8-729-422-29	TRANSISTOR 2SD601A-S	
Q404	8-729-422-29	TRANSISTOR 2SD601A-S	
Q405	8-729-422-29	TRANSISTOR 2SD601A-S	
Q406	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q502	8-729-422-29	TRANSISTOR 2SD601A-S	
Q503	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q504	8-729-422-29	TRANSISTOR 2SD601A-S	
Q505	8-729-422-29	TRANSISTOR 2SD601A-S	
Q506	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q601	8-729-119-76	TRANSISTOR 2SA1175-HFE	

Ref. No.	Part No.	Description			Remarks
		< RESISTOR >			
R205	1-216-075-00	METAL CHIP	12K	5%	1/10W
R206	1-216-073-00	METAL CHIP	10K	5%	1/10W
R251	1-216-073-00	METAL CHIP	10K	5%	1/10W
R252	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R253	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R254	1-216-075-00	METAL CHIP	12K	5%	1/10W
R262	1-220-227-11	METAL GLAZE	1.2	10%	1/4W
R263	1-220-227-11	METAL GLAZE	1.2	10%	1/4W
R301	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R302	1-216-025-00	METAL GLAZE	100	5%	1/10W
R303	1-216-025-00	METAL GLAZE	100	5%	1/10W
R304	1-216-041-00	METAL CHIP	470	5%	1/10W
R308	1-216-073-00	METAL CHIP	10K	5%	1/10W
R309	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R310	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R311	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R312	1-216-073-00	METAL CHIP	10K	5%	1/10W
R313	1-216-073-00	METAL CHIP	10K	5%	1/10W
R314	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R315	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R316	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R317	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R318	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R319	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R321	1-216-073-00	METAL CHIP	10K	5%	1/10W
R322	1-216-073-00	METAL CHIP	10K	5%	1/10W
R323	1-216-013-00	METAL CHIP	33	5%	1/10W
R324	1-216-073-00	METAL CHIP	10K	5%	1/10W
R325	1-216-073-00	METAL CHIP	10K	5%	1/10W (C460Z)
R326	1-216-295-00	CONDUCTOR, CHIP (2012)			
R327	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R328	1-216-295-00	CONDUCTOR, CHIP (2012)			
R331	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R333	1-216-073-00	METAL CHIP	10K	5%	1/10W
R334	1-216-073-00	METAL CHIP	10K	5%	1/10W
R335	1-216-073-00	METAL CHIP	10K	5%	1/10W
R336	1-216-295-00	CONDUCTOR, CHIP (2012)			
R337	1-216-295-00	CONDUCTOR, CHIP (2012)			
R338	1-216-073-00	METAL CHIP	10K	5%	1/10W
R339	1-216-295-00	CONDUCTOR, CHIP (2012)			
R340	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R341	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R342	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R343	1-216-073-00	METAL CHIP	10K	5%	1/10W
R344	1-216-295-00	CONDUCTOR, CHIP (2012)			
R381	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R382	1-216-073-00	METAL CHIP	10K	5%	1/10W
R383	1-216-001-00	METAL CHIP	10	5%	1/10W
R403	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R404	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R405	1-216-077-00	METAL CHIP	15K	5%	1/10W
R406	1-216-077-00	METAL CHIP	15K	5%	1/10W
R407	1-216-691-11	METAL CHIP	47K	0.5%	1/10W
R408	1-216-691-11	METAL CHIP	47K	0.5%	1/10W
R409	1-216-053-00	METAL CHIP	1.5K	5%	1/10W

MAIN **POWER SW** **SENSOR**

Ref. No.	Part No.	Description			Remarks
R410	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R411	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R412	1-216-047-00	METAL GLAZE	820	5%	1/10W
R413	1-216-033-00	METAL CHIP	220	5%	1/10W
R414	1-216-033-00	METAL CHIP	220	5%	1/10W
R415	1-216-295-00	CONDUCTOR, CHIP (2012)			
R416	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R418	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R419	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R420	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R421	1-216-073-00	METAL CHIP	10K	5%	1/10W
R422	1-247-807-31	CARBON	100	5%	1/4W
R450	1-216-113-00	METAL CHIP	470K	5%	1/10W
R451	1-216-073-00	METAL CHIP	10K	5%	1/10W
R452	1-216-072-00	METAL CHIP	9.1K	5%	1/10W
R453	1-216-073-00	METAL CHIP	10K	5%	1/10W
R454	1-216-073-00	METAL CHIP	10K	5%	1/10W
R455	1-216-073-00	METAL CHIP	10K	5%	1/10W
R456	1-216-048-00	METAL CHIP	910	5%	1/10W
R457	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R470	1-216-073-00	METAL CHIP	10K	5%	1/10W
R471	1-216-073-00	METAL CHIP	10K	5%	1/10W
R503	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R504	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R505	1-216-077-00	METAL CHIP	15K	5%	1/10W
R506	1-216-077-00	METAL CHIP	15K	5%	1/10W
R507	1-216-691-11	METAL CHIP	47K	0.5%	1/10W
R508	1-216-691-11	METAL CHIP	47K	0.5%	1/10W
R509	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R510	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R511	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R512	1-216-047-00	METAL GLAZE	820	5%	1/10W
R513	1-216-033-00	METAL CHIP	220	5%	1/10W
R514	1-216-033-00	METAL CHIP	220	5%	1/10W
R515	1-216-295-00	CONDUCTOR, CHIP (2012)			
R516	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R517	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R518	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R519	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R520	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R521	1-216-073-00	METAL CHIP	10K	5%	1/10W
R522	1-247-807-31	CARBON	100	5%	1/4W
R550	1-216-113-00	METAL CHIP	470K	5%	1/10W
R551	1-216-073-00	METAL CHIP	10K	5%	1/10W
R552	1-216-072-00	METAL CHIP	9.1K	5%	1/10W
R553	1-216-073-00	METAL CHIP	10K	5%	1/10W
R554	1-216-073-00	METAL CHIP	10K	5%	1/10W
R555	1-216-073-00	METAL CHIP	10K	5%	1/10W
R556	1-216-048-00	METAL CHIP	910	5%	1/10W
R557	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R601	1-216-085-00	METAL CHIP	33K	5%	1/10W
R602	1-216-073-00	METAL CHIP	10K	5%	1/10W
R603	1-216-091-00	METAL CHIP	56K	5%	1/10W
R604	1-216-073-00	METAL CHIP	10K	5%	1/10W
R607	1-216-037-00	METAL CHIP	330	5%	1/10W
		< SWITCH >			
S401	1-571-308-11	SWITCH, SLIDE (COMMAND MODE)			

Ref. No.	Part No.	Description			Remarks
		< VIBRATOR >			
X301	1-579-834-11	VIBRATOR, CRYSTAL 33MHz			
X401	1-579-175-11	VIBRATOR, CERAMIC 10MHz			
**********					
*	1-665-357-11	POWER SW BOARD			
		**********			
		< CONNECTOR >			
CN703	1-750-186-11	CONNECTOR, BOARD TO BOARD 6P			
		< RESISTOR >			
R701	1-249-417-11	CARBON	1K	5%	1/4W F
R702	1-249-419-11	CARBON	1.5K	5%	1/4W F
R703	1-249-421-11	CARBON	2.2K	5%	1/4W F
R704	1-247-843-11	CARBON	3.3K	5%	1/4W
R705	1-249-427-11	CARBON	6.8K	5%	1/4W F
R706	1-249-431-11	CARBON	15K	5%	1/4W
R707	1-249-419-11	CARBON	1.5K	5%	1/4W F (C460Z)
R707	1-249-427-11	CARBON	6.8K	5%	1/4W F (CE515)
R708	1-249-415-11	CARBON	680	5%	1/4W F (C460Z)
R708	1-249-421-11	CARBON	2.2K	5%	1/4W F (CE515)
R709	1-249-417-11	CARBON	1K	5%	1/4W F (C460Z)
R709	1-247-843-11	CARBON	3.3K	5%	1/4W (CE515)
		< SWITCH >			
S701	1-554-303-21	SWITCH, TACTILE (DISC 1)			
S702	1-554-303-21	SWITCH, TACTILE (DISC 2)			
S703	1-554-303-21	SWITCH, TACTILE (DISC 3)			
S704	1-554-303-21	SWITCH, TACTILE (DISC 4)			
S705	1-554-303-21	SWITCH, TACTILE (DISC 5)			
S706	1-554-303-21	SWITCH, TACTILE (CONTINUE)			
S707	1-554-303-21	SWITCH, TACTILE (SHUFFLE)			
S708	1-554-303-21	SWITCH, TACTILE (PROGRAM)			
S709	1-554-303-21	SWITCH, TACTILE (REPEAT)			
S710	1-554-303-21	SWITCH, TACTILE (DISC CHECK)(CE515)			
S710	1-554-303-21	SWITCH, TACTILE (TIME/MEMO)(C460Z)			
S751	1-554-118-00	SWITCH, PUSH (1 KEY)(POWER)			
**********					
*	1-647-362-11	SENSOR BOARD			
		**********			
		< CONNECTOR >			
CN801	1-573-383-11	PIN, CONNECTOR (PC BOARD) 2P			
CN802	1-750-243-11	SOCKET, CONNECTOR 6P			
		< DIODE >			
D801	8-749-924-18	DIODE PHOTO INTERRUPTER RPI-1391			
D802	8-749-924-30	DIODE PHOTO REFLECTOR GP2S28			
		< RESISTOR >			
R801	1-249-416-11	CARBON	820	5%	1/4W F
R802	1-249-406-11	CARBON	120	5%	1/4W F
**********					

TABLE MOTOR

Ref. No.	Part No.	Description	Remarks
*	1-647-364-11	TABLE MOTOR BOARD **********	
		< MOTOR >	
M801	A-4660-525-A	MOTOR ASSY, ROTARY (TABLE)	
**********			
		MISCELLANEOUS **********	
7	1-782-219-11	WIRE (FLAT TYPE) (17 CORE)	
9	1-782-220-11	WIRE (FLAT TYPE) (9 CORE)	
⚠59	1-575-651-21	CORD, POWER (AEP)	
⚠59	1-590-926-11	CORD, POWER (US,CND)	
⚠59	1-696-845-11	CORD, POWER (AUS)	
72	1-751-052-11	WIRE (FLAT TYPE) (6 CORE)	
105	1-466-996-11	ENCODER, ROTARY	
109	1-765-443-11	WIRE (FLAT TYPE) (23 CORE)	
* 125	1-452-879-11	MAGNET	
⚠751	8-848-379-31	OPTICAL PICK-UP KSS-213BA/F-NP	
752	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
M101	X-4917-523-3	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-3	MOTOR ASSY (SLED)	
M801	A-4660-525-A	MOTOR ASSY, ROTARY (TABLE)	
M802	A-4660-914-A	MOTOR ASSY, LOADING	
⚠T601	1-429-956-11	TRANSFORMER, POWER (US,CND)	
⚠T601	1-431-076-11	TRANSFORMER, POWER (AEP,AUS)	
**********			

Ref. No.	Part No.	Description	Remarks
		ACCESSORIES & PACKING MATERIALS **********	
	1-475-088-11	REMOTE COMMANDER (RM-DC53)	
	1-558-271-11	CORD, CONNECTION (AUDIO)	
	1-777-241-11	CORD, CONNECTION (CONTROL A1)(CND)	
	3-810-765-33	MANUAL,COMMONNESS INSTRUCTION (ENGLISH)(US,AUS)	
	3-810-765-43	MANUAL,COMMONNESS INSTRUCTION (ENGLISH/FRENCH/GERMAN/SPANISH/DUTCH/SWEDISH/ITALIAN/PORTUGUESE/CHINESE) (CND,AEP)	
	3-859-179-11	MANUAL, INSTRUCTION (ENGLISH)(US,AUS)	
	3-859-179-21	MANUAL, INSTRUCTION (ENGLISH/FRENCH/SPANISH/PORTUGUESE) (CND,AEP)	
	3-859-179-31	MANUAL, INSTRUCTION (GERMAN/DUTCH/SWEDISH/ITALIAN)(AEP)	
	4-983-956-01	COVER, BATTERY (FOR RM-DC53)	
**********			
		********** HARDWARE LIST **********	
#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#2	7-685-872-09	SCREW +BVTT 3X8 (S)	
#3	7-685-648-79	SCREW (M3X12), TAPPING	
#4	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#5	7-621-772-00	SCREW +B 2X3	
#6	7-685-134-19	SCREW (+ PTPWH) (2.6X8)	
#7	7-621-255-15	SCREW +P 2X3	
#8	7-685-871-01	SCREW +BVTT 3X6 (S)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

9-960-962-11

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